

FMO

Entrepreneurial
Development
Bank

ACCESS TO
ENERGY FUND

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Annual report

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FMO manages the **Access to Energy Fund**
on behalf of the Dutch government



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Our mission
is to **empower**
entrepreneurs
to build a
better world.

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Government of the Netherlands

FMO has a dedicated department – Public Investment Management (PIM) – for the management of government and public funds, consisting of MASSIF, the Infrastructure Development Fund (IDF) and the Access to Energy Fund (AEF). The total committed portfolio of these funds amounts to € 1,212.1 mln as per December 31, 2016.



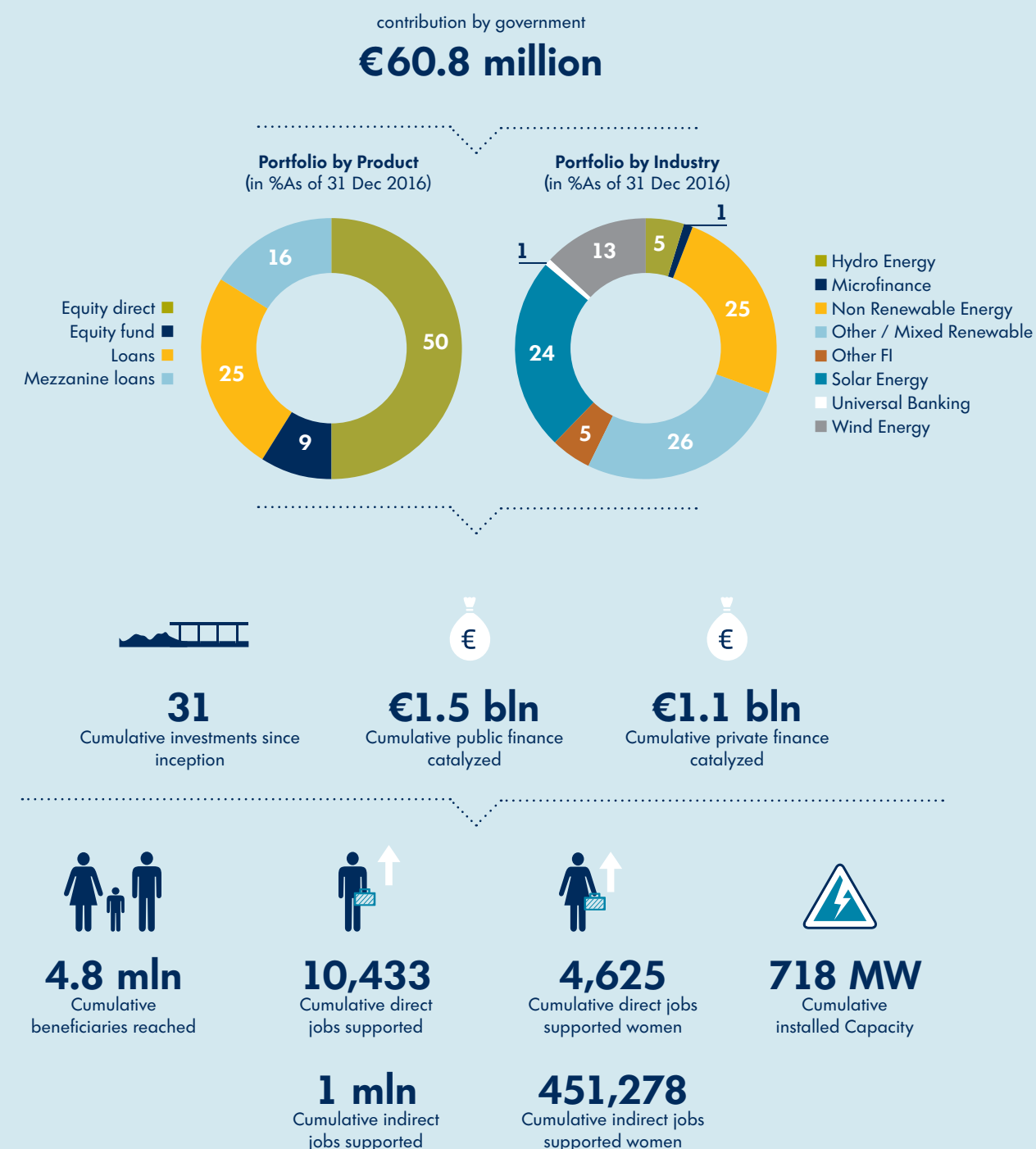
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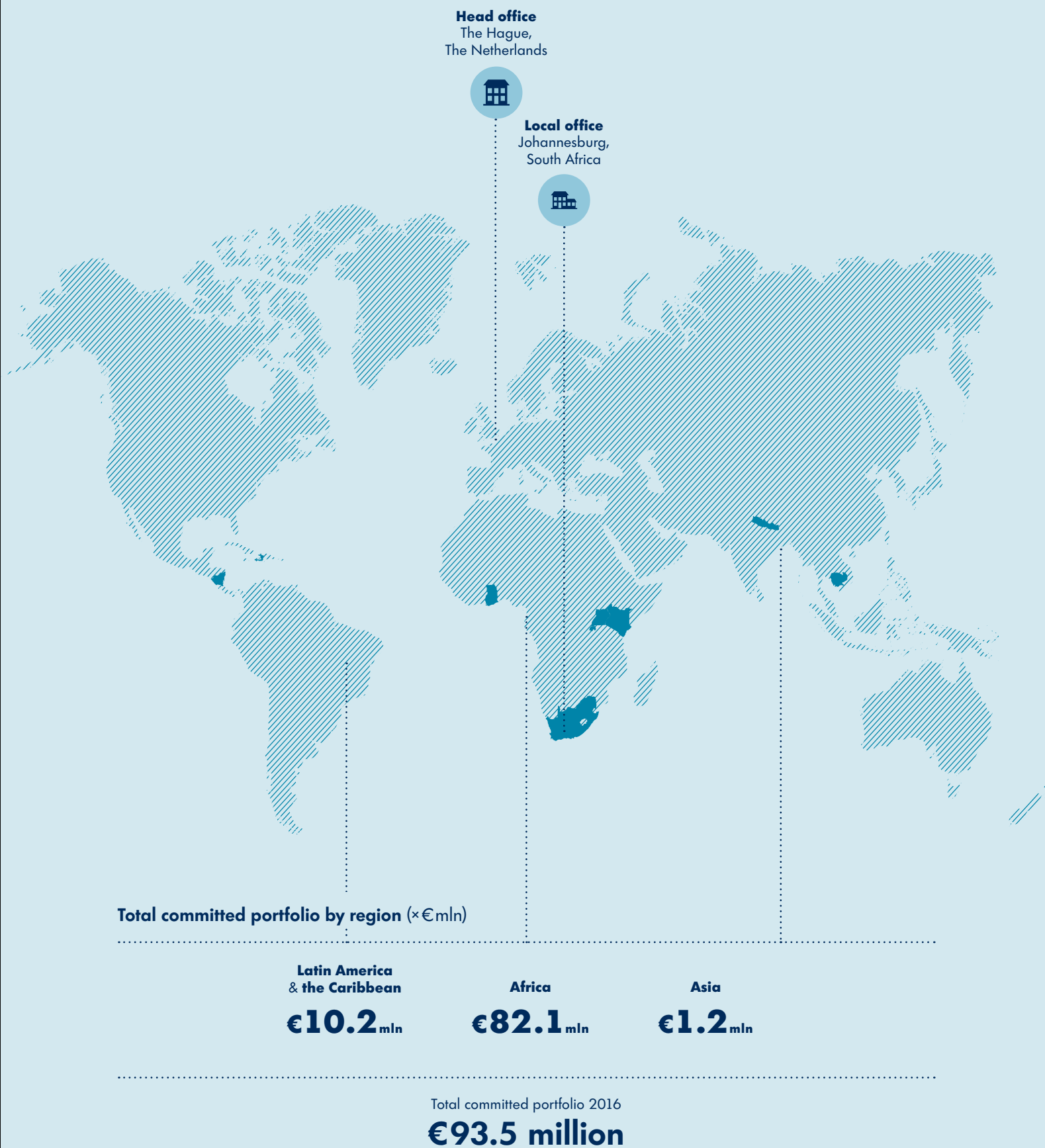
AT A GLANCE

The Access to Energy Fund (AEF) has been set up to actively support the creation of sustainable access to energy in developing countries by providing risk bearing funding; equity, subordinated loans, local currency loans and to a limited extent convertible grants. The goal of the fund is to provide access to energy to at least three million people. In order to reach this goal, € 102 million of funding has been made available by the Dutch Ministry of Foreign Affairs. Since December 2012, the fund is solely focused on Sub-Saharan Africa, specifically targeting affordable, clean and renewable energy solutions, on-grid as well as off-grid.

Achievements of the Access to Energy Fund 2006 – 2016



2016 Committed Portfolio by Region





LETTER FROM THE FUND MANAGER

Dear Stakeholder,

The Access to Energy Fund management is pleased to present the results for 2016. Throughout the year, we continued to focus on strengthening the Access to Energy Fund (AEF) portfolio. We have renewed the layout of the Annual Report and hope this will give you a sense of the inspiring projects financed by AEF. In 2016, AEF was the subject of an external valuation. The final report has not yet been presented at the time of writing this annual report but preliminary results highlighted the relevance of AEF to for the goals that it has been set up for.

A key highlight this year was the KivuWatt project, which concerns the highly innovative development, construction and operation of an integrated methane gas extraction and production facility and associated 26MW power plant at Kibuye, Lake Kivu, Rwanda. There were issues during construction that caused a three-year delay in the plant becoming operational. The plant became operational in December 2015 and has since been producing a large quantities of gas and has reached its expected production capacity. The loan is being serviced, albeit with a three year delay. KivuWatt is no longer provisioned.

Another 2016 highlight, was the signing of an AEF investment in BIX Capital. BIX aims at increasing access to essential household products and services (predominantly cookstoves, bio-digesters and water-purifiers) to people at the base-of-the-pyramid. BIX provides finance in the value chain up front in exchange for a preferential claim on the future impact certificate revenue (carbon credits) to redeem the funding.

A third important milestone in 2016 was the development of Climate Investor One (CIO), which started investing in the development of its first projects, with three projects in the pipeline and the first disbursements taking place. At present, the AEF Investment in CIO is officially EUR 6mIn plus EUR 1mIn for FTEs. We are grateful to the Ministry for allowing AEF to be a cornerstone investor in CIO and for considering to increase that support, which will eventually translate into a boost in access to renewable energy for the poorest. The blended finance character of CIO ensures that AEF's support is catalyzes Development Financial Institutions (DFIs) and commercial financing into access to energy in Sub-Saharan Africa.

In 2016, FMO's self set target was to commit a further EUR 20mIn to AEF projects; at YE2016 signed commitments fell short by EUR 8mIn. The projects that AEF is targeting can have long lead times, as occurred with BIX mentioned above. Sectors that AEF particularly wants to support, like off-grid energy and clean cooking, are relatively young and have not yet generated an abundance of eligible projects. Growth, especially in the off-grid sector has picked up, and because the market is still high-risk, there is a highly additional role to play for AEF. The early stage 2017 pipeline for AEF is promising and if lead times can be reduced, we expect AEF to be able to substantially increase the new commitments in 2017.

AEF is highly relevant, both from a climate as well as an inclusion perspective, and has two impact targets for which the results are:

1. Beneficiaries Reached as per YE2016 is at 4.8 mln (target for YE 2018 is 3mln);
2. Total financing catalyzed at contracting, including DFI and commercial financing as per YE 2016 is EUR 2.6 bln comprising 1.1 bln commercial financing catalyzed at contracting and EUR 1.5 bln public financing catalyzed at contracting. This results in a multiple of 27.1x AEF Commitment at contracting (the target for YE2018 is 3.25x)



The definition for Beneficiaries Reached has been amended after due consultation with the Ministry and now gives a better estimation of the people that benefit from AEF investments. We are proud to note that both targets are within reach.

AEF is relevant in climate mitigation and as such is an impactful policy instrument. Looking ahead, AEF can expand in developing the off-grid sector further and building on the clean cooking sector. As a cornerstone investor, AEF is highly catalyzing for Climate Investor One and we are grateful to the Ministry of Foreign Affairs, which has supported the Fund in the past and contributes to achieving the goals that AEF has been set up for.

Floor van Oppen
Fund Manager Access to Energy Fund

OUR STRATEGY

The Access to Energy Fund (AEF) aims at uplifting livelihoods at the bottom-of-the-pyramid by increasing access to clean energy. The Fund diversifies its investment activity among different high impact sectors, including: on/off grid renewable energy production and clean cooking. Blended finance constitutes a powerful instrument to refine the bankability of high-risk projects. Hence, AEF aims at mobilizing public and private funds to achieve its impact goals.

Investment Themes

On-Grid Renewable Energy

AEF investment strategy will further focus on the financing of renewable energy (e.g. wind, solar, geothermal) production plants and delivery channels. AEF aims at increasing the production of renewable energy in Sub Saharan Africa and enlarging the outreach of utilities producers to meet the energy supply needs of the low-income population.

Off-Grid Renewables

Off-grid / distributed energy, is becoming a critical part of the energy supply in several countries and is servicing areas that are unlikely to be covered by the grid. AEF currently sees most opportunities in East Africa and is also aiming to support this sector in West Africa. This sub-sector of the energy space is receiving a lot of interest, with many suppliers and many interested financiers. The result is very high competition (not all players will survive) and high pricing from an equity perspective.

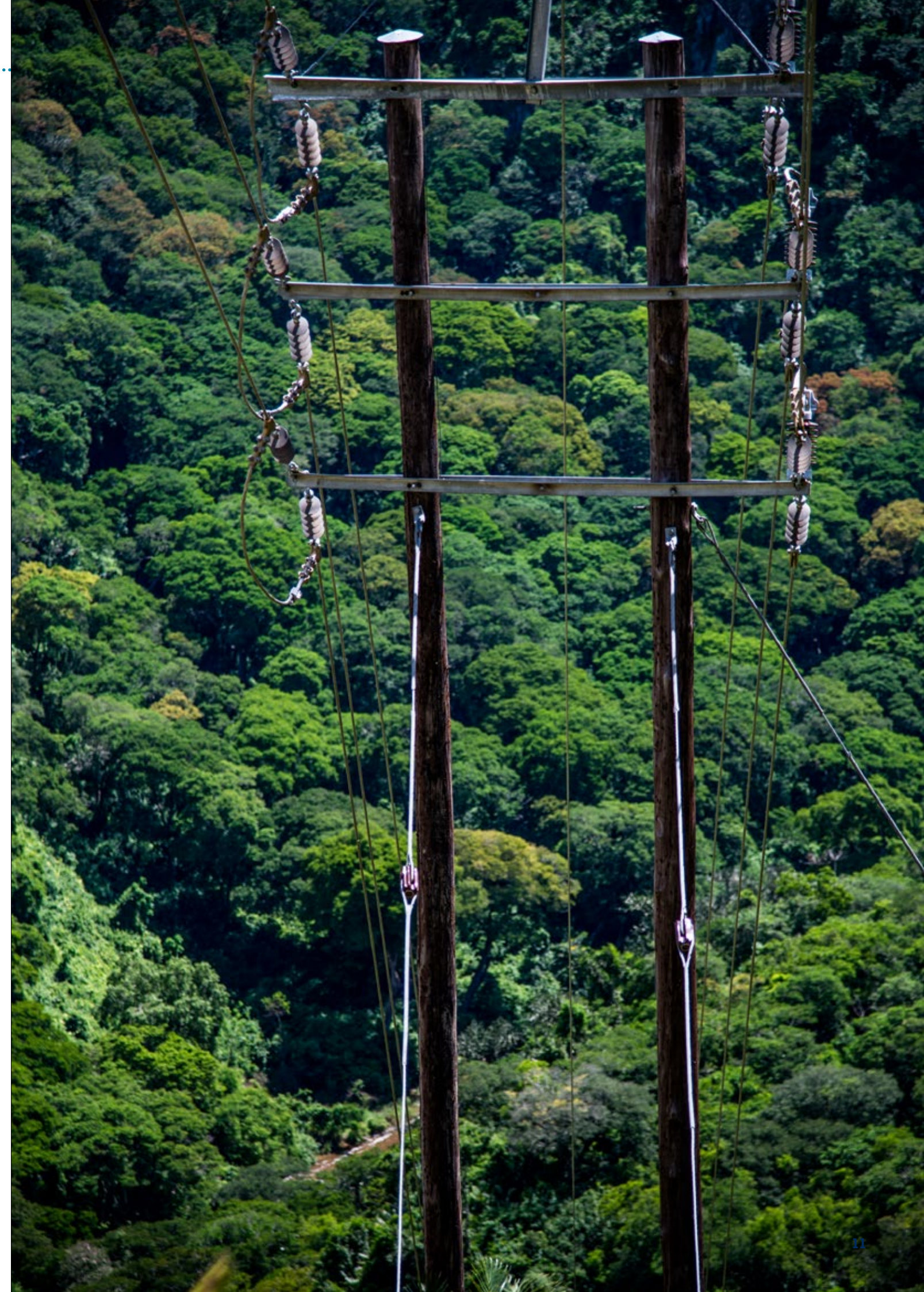
In order for a customer to gain access to an off-grid home system, they need to invest in that system. Off-grid companies have developed leasing structures in order to finance this investment for the customers. There is a new development in the off-grid space, where companies are setting up consumer finance programs. Debt financing and local currency debt financing to pre-finance the end user pay plan is extremely scarce. FMO foresees a highly additional and catalytic role for FMO (through the State Funds) to provide risk participations to local banks for the debt financing in the sector. We are currently working on one such transaction, whereby the local bank would not provide such financing without the backing of another financier like FMO. This could give a big impulse to rolling out the off-grid market.

Clean Cooking

In African countries where access to energy sources for low-income households is scarce, people often rely on highly polluting and dangerous solutions to cook their food. Clean cooking is therefore a pivotal topic with regard to creating sustainable livelihoods at Bottom of the Pyramid household level. Therefore, AEF investment strategy will further focus on providing flexible financing to companies that are developing innovative clean cooking solutions for the Bottom of the Pyramid.

Blending

Blending is defined as the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets. The State Funds, among which Access to Energy Fund, allow FMO to be active in an earlier stage, by taking higher-risk positions to catalyze development finance and allowing FMO to bridge the gap between philanthropic funds (also including start-up capital and grants) and Development Finance Institutions (DFIs). At the investment level, FMO is working on setting up a Blended Finance facility with the Shell Foundation. Of course Climate Investor One also aims to establish a blended finance platform for access to energy projects.



OUR BUSINESS MODEL

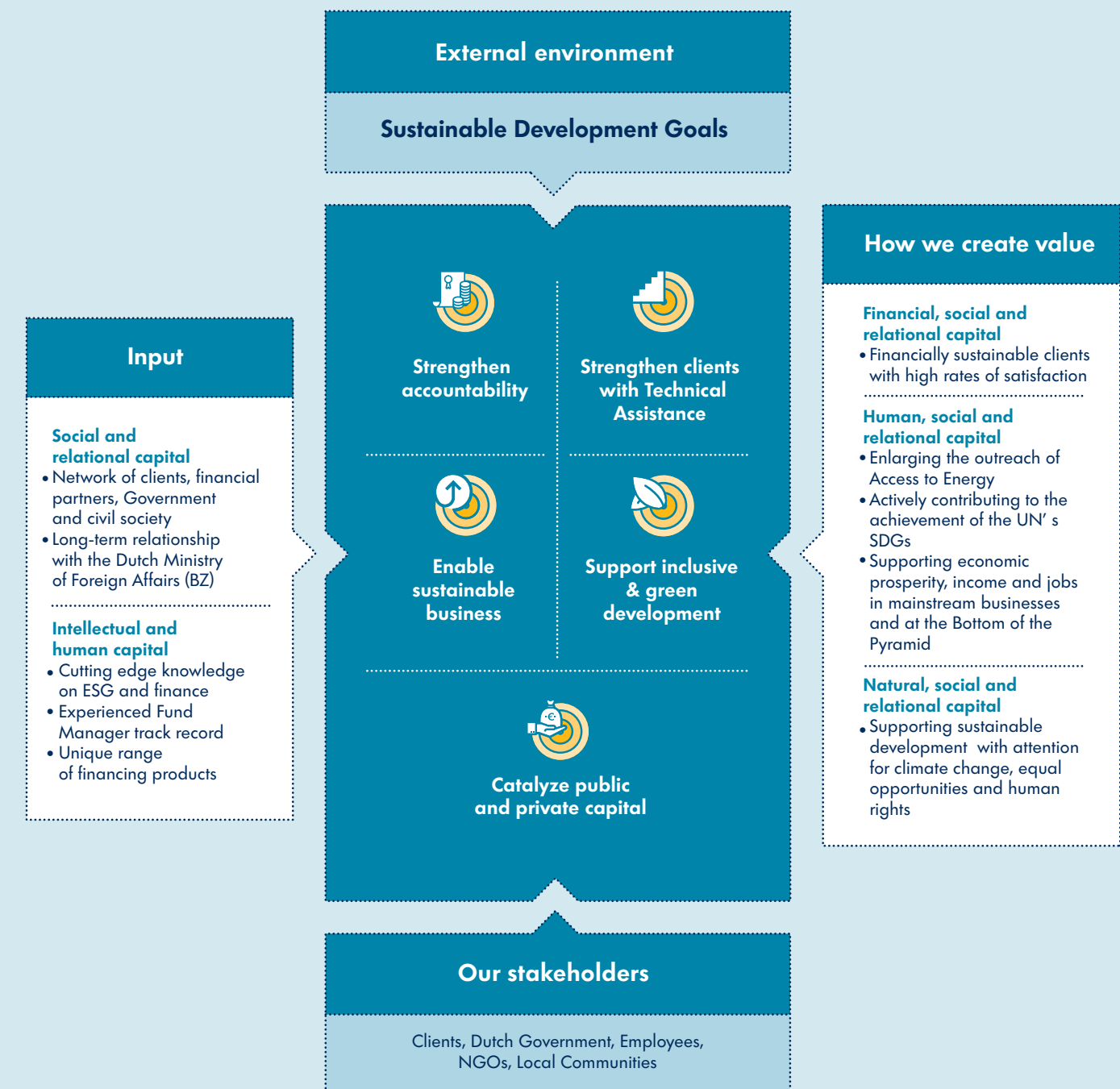
The visual shows how AEF creates value for its stakeholders, by steering on the strategic priorities that we set and making use of the various financial and non-financial capitals (inputs) that we control.

Our knowledge partners facilitate the transfer of best-practice knowledge to our clients.

Our key inputs

We have cutting edge knowledge of ESG and commercial finance in developing countries, as is illustrated by our track-record as a Fund Manager. Our internal culture, typified by a drive to fulfil our mission and the willingness to take risks yet balanced by a strong risk awareness, supports this strength. Our employees exemplify our corporate values: engaged, excellence, cooperation and making a difference.

Our networks are a crucial part of our business model. These are networks of clients, financial partners as well as knowledge partners. Our financial partners are other development finance institutions, commercial investors and banks, as well as governments. These partners are central to our approach to business, as they leverage our own capital and in that way allow us to increase our impact beyond our own financial means. Our knowledge partners facilitate the transfer of best-practice knowledge to our clients.



OUR INVESTMENT PROCESS

The diagram illustrates the sequence of process steps that we follow to create value on the individual project level.

We strive to create sustainable impact in developing countries. To support our efforts in this area, we have a framework in place – the FMO Sustainability Policy Universe – consisting of policies and tools that guide our behavior and way of working. This integrated approach, which ensures sustainability is at the heart of our operations, is aligned with the Sustainable Development Goals.

1 Sourcing

We identify potential opportunities through a deep-rooted network in developing countries.

Our initial assessment focuses on factors as country, investment plan, development impact and our role as financier. Increasingly, we steer our investments towards projects that foster a transition to a more inclusive and greener economy.

2 Screening

If the financing opportunity meets our investment criteria, we continue to analyze potential risks and challenges.

To ensure that the client complies with anti-money laundering, anti-corruption and anti-terrorist financing regulations, we conduct a Know-Your-Customer assessment. Furthermore, we categorize the project based on its potential effects on environmental, social and human rights conditions, as well as governance structures benchmarked against the IFC Performance Standards.

3 Due diligence

To fully understand and map the risks and opportunities, we conduct thorough due-diligence including on-the-ground research through local visits.

We visit the client and local stakeholders to discuss in detail the impact of the Fund's financing, their business, and environmental, social and human rights risks. We also analyse the client's tax practices and policies. Our tax department provides expert advice where needed. If we identify gaps in meeting international standards or policies, we develop an action plan to mitigate and manage any of the identified risks and promote positive development in these areas.

Applicable investment policies, guidelines and tools

For stage: 1, 2 and 3

- Sustainability Policy
- Country selection
- Investment criteria
- Exclusion List
- Position statement on Responsible Tax
- Know Your Customer policy
- Anti-bribery & Corruption

For stage 4

- Disclosure policy including early-disclosure of potential investments
- Active stakeholder engagement
- Complaints mechanism

For stage 5 and 6

- Capacity development program
- Board participation (through private equity investments)
- Exchange programs and network events
- ESG masterclass, toolkits
- Disclosure
- Complaints mechanism

6 Monitoring and value creation

Throughout the lifetime of the investment, we monitor our client's financial performance as well as progress on the environmental, social and governance requirements.

We receive annual or more frequent financial reports, conduct assessments (including ESG reviews) with the help of local consultants and pay regular visits. If necessary, we support our clients with capacity development and technical assistance to improve their business and identify new opportunities.

5 Contracting

For each investment, we have assessed the environmental, social and governance risks, identified where improvements can be made, and established action plans for further development.

After internal approval, we sign an agreement with our clients to ensure that our requirements and conditions are legally binding. We disclose our investments on our website after contracting.

4 Stakeholder engagement

In addition to regular meetings and dialogue sessions with our main stakeholders, we also give stakeholders the opportunity to provide input for our decision-making on new transactions with a high environmental or social risk profile.

In 2016, we started to disclose the potential investment online to ensure that we have not overlooked any important concerns. From identification to implementation, we consult key stakeholders to properly assess, monitor and manage the impacts of the project.

AEF AND PRIVATE SECTOR DEVELOPMENT

The Public Funds are a powerful foreign policy instrument, which can contribute to the development and growth of local economies in emerging markets, where stable funding sources are scarce and the risk appetite of local commercial investors is limited.

We aim to support and develop early-stage businesses and businesses in high-risk markets

In many fast-growing developing countries, the demand for electricity continues to rise while power infrastructure struggles to keep up. Our main fossil fuel sources – oil, coal and gas – are finite natural resources, and we are depleting them at a rapid rate. Climate change has become a reality and is changing our future. This is intensifying the race to come up with energy solutions that are affordable for all and produced in ways that can be sustained by the global economy and the planet. Today, a large part of the world is still covered in darkness after nightfall. Especially Sub-Saharan Africa has some key issues regarding energy availability. Access to energy is low due to lacking infrastructure (connections to the grid) and/or insufficient generation capacity. According to the World Bank (2016) only 24% of the Sub-Saharan African population has access to electricity. At the same time, the area faces poor reliability of the electricity available, especially impacting local African manufacturing enterprises. Power outages are experienced 56 days per year on average. The Access to Energy Fund(AEF) is a EUR 102 million fund jointly initiated by the Dutch government and FMO in 2003 to support private sector projects aimed at providing long-term access to energy services in Sub-Saharan Africa.

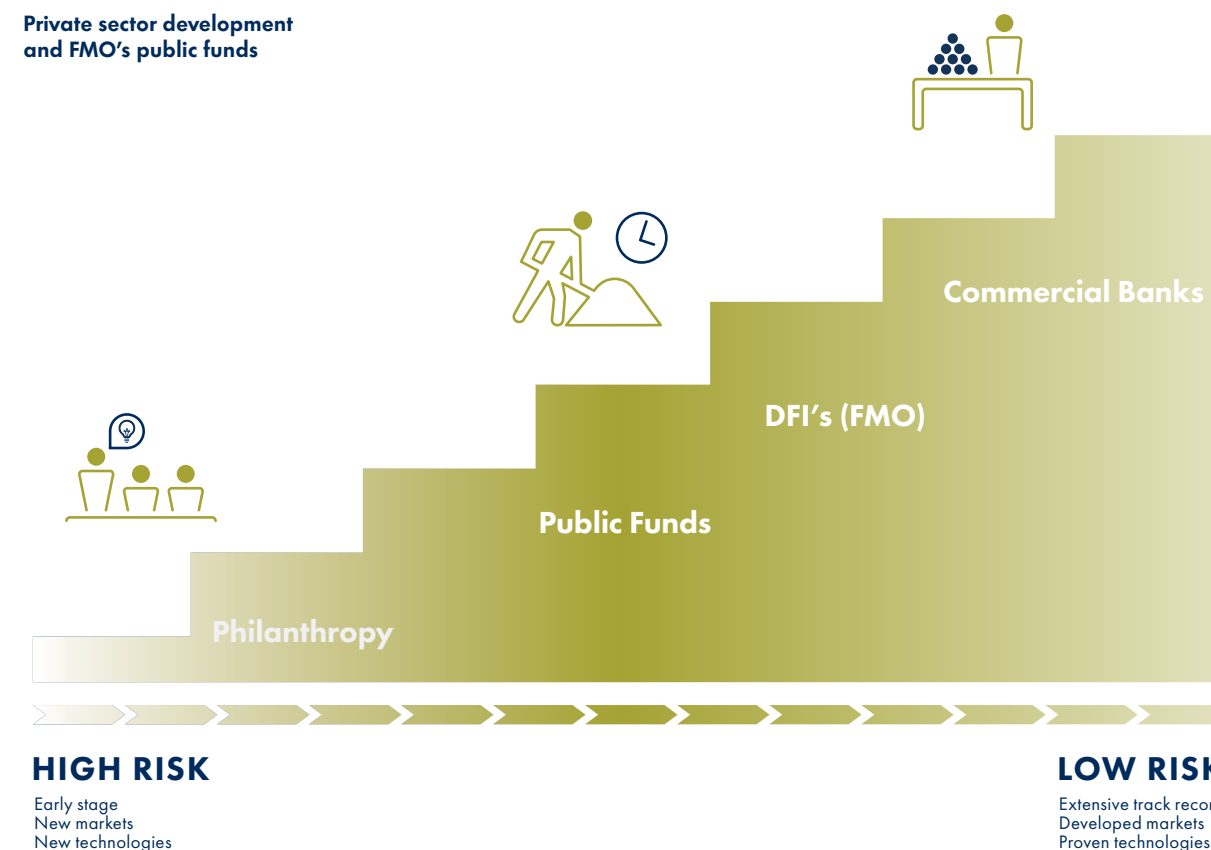
Private Sector Development and Blended Finance
FMO manages several Private Sector Development (PSD) programs on behalf of the Dutch government. The Access to Energy Fund (AEF), supporting private sector projects that create sustainable access to energy services in Sub-Saharan Africa, is one of these funds.

In addition to AEF, FMO manages several other public funds for the Dutch Government, each investing in higher-risk projects. MASSIF contributes to developing and strengthening the financial infrastructure in developing countries to better serve entrepreneurs and consumers at the lower end of the financial market and the Infrastructure Development Fund (IDF) provides long-term financing for infrastructure projects in low-income countries. The Funds¹ have a longstanding record of catalyzing other investors, for example by providing a junior tranche, longer tenor, or local currency loan. In addition, the Funds' financing and technical assistance are aimed at growing and strengthening organizations in order to finally graduate them out of the AEF portfolio to other market parties.

Through its blended finance approach, FMO aims to support and develop early stage businesses and businesses in high-risk markets by providing (public) funding and advisory services (such as Capacity Development, Technical Assistance, Corporate Governance, Environment & Social). This approach applies to both FMO-A and the State Funds. The main purpose of blended finance is to enable financing of projects with a high development impact by carrying a risk that is too high for international financial institutions (IFIs) and/or commercial financiers.

Public funds such as AEF can play an important role in private sector development of high risk markets that otherwise would not be served. The blended finance approach can thus de-risk transactions for FMO and other IFIs, as well play an important role in crowding in commercial and impact investors into higher risk markets. By filling the gap between more philanthropic and grant-based money flows and development and commercial banks, public funds can be highly additional to markets, and contribute to the development and growth of local economies in emerging markets where stable funding sources are scarce and the risk appetite of local commercial investors is limited.

Private sector development and FMO's public funds



1. Please note that FMO also manages FOM (a government guarantee facility), FOM-OS (a government fund, of which the investment period has ended), PDF (FMO's Partnership Development Facility), and BCD (FMO's capacity development program for FMO-A clients) on behalf of the Dutch government. FMO also oversees FMO Investment Management (FIM), which manages third party funds. None of these funds are included above.



FMO - AIF annual report 2016

Working together to obtain results

On behalf of our investor:
The Ministry of Foreign Affairs



The Access to Energy Fund was initiated by the Dutch government and FMO in 2003 to support private sector projects aimed at providing long-term access to energy services. Since December 2012, the fund has been investing in Sub-Sahara Africa only, providing affordable, clean and renewable off-grid energy solutions. A recent evaluation pointed to its great relevance.

As we see climate change becoming a reality and changing the future, the race has intensified to come up with energy solutions that are affordable and sustainable – for the good of the global economy and the planet.

The Dutch government has committed itself to supplying renewable energy to 50 million people in developing countries by 2030. We have reached over 16 million people in the period from 2004 to 2015 and we are scaling up. The Access to Energy Fund is an important tool, contributing to the achievement of this goal. It supports energy generation, transmission and distribution projects in developing countries and is on its way to connecting at least 3 million people by 2018. We are therefore proud to be associated with this fund and have just allocated another 18 million Euros, which will support Climate Investor One, a fund that is part of the Access to Energy Fund.

In short, FMO is an excellent partner to obtain sustainable results in the field of renewable energy.

Kees Rade
Netherlands Ambassador for Sustainable Development

AEF AND THE SUSTAINABLE DEVELOPMENT GOALS

On 1 January 2016, the 17 United Nations Sustainable Development Goals officially came into force. The Sustainable Development Goals (SDGs) call for action by all countries and parties – government, civil society and the private sector – e.g. to end extreme poverty, reduce inequality and tackle climate change by 2030. The SDGs are increasingly supported by businesses, governments, non-governmental organizations and the general public, and hence align efforts towards achieving these common goals.

Access to energy is key to achieving the SDGs

Stakeholder needs

The SDGs provide a framework for different stakeholder groups to align and prioritize impact objectives. Our stakeholders consistently indicate the importance of reducing inequality, with particular attention to improving gender equality, and combatting climate change. The Dutch government is actively implementing the SDGs into its agenda, and the financial sector as a whole is also increasingly endorsing the SDGs. At the Global Impact Investing Network, held in Amsterdam in December 2016, FMO and 17 other Dutch financial institutions, collectively managing over EUR 2.8 trillion in assets, invited the Dutch government and Dutch Central Bank to continue to make a concerted effort with them in support of the United Nations Sustainable Development Goals. The initiative is the first in the world to bring together national pension funds, insurance firms, and banks around a shared SDG investment agenda.

Achieving the SDGs through access to energy

Through its mission and activities, the Access to Energy Fund (AEF) contributes directly and indirectly to the achievement of the UN's Sustainable Development Goals. AEF provides long term financing to enhance access to energy in Sub-Saharan Africa and works with the investees to grow their success in a financially, environmentally and socially sustainable way.

In many developing countries, the demand for electricity continues to rise, unmet by stable and reliable energetic sources. The depletion of natural resources and the fact of climate change intensify the necessity of energy solutions that are affordable and produced in ways that can be sustained by the global economy and the planet. AEF supports private sector projects aimed at providing long-term access to energy services in Sub-Saharan Africa, where only 24% (World Bank, 2015) of the population has access to electricity. AEF contributes to increase electrification rates and plays a central role in developing rural access to energy (aiming at households in particular).

Increasing access to energy in emerging economies has proven to be a key determinant for the achievement of the UN's Sustainable Development Goals. While the SDGs do not explicitly target infrastructure development, the sector is a key enabler for many of them:



· AEF contributes to stable and cheaper energy supply, reducing the energy-expenditure of households and ultimately raising the disposable income.



· Increased access to energy enables households to adopt cleaner and safer cooking stoves, conserve food better, and install domestic lighting that fosters schooling.



· AEF aims at improving access to clean energy, which improves circumstances of the poor. Bringing light to households and improving clean cooking solutions have a disproportionately large positive impact for women and children.



· AEF provides long term financing to companies and initiatives involved in the construction and development of renewable energy facilities. The broad scope of the funds comprises a power plant distribution lines, and off-grid facilities.



· Stable access to energy enables the material economy to thrive. Various industries and SMEs can achieve productivity gains by benefiting from more stable and cheaper access to energy.



· Climate change presents the single biggest threat to development, and its widespread, unprecedented impacts disproportionately burden the poorest and most vulnerable. AEF fosters the uptake of renewable energy to minimize the disruptive potential of climate change. AEF internalizes environmental & social risk drivers in the investment decision making, accounting for the depletion of natural resources, and biodiversity preservation.



· AEF provides long-term financing for renewable energy projects in low-income countries by being a first mover or by offering risk capital to make projects bankable. AEF has a clear additional effect by attracting commercial parties and making them willing to invest at financial close or at a later stage.



PERFORMANCE ON OUR STRATEGY

Highlights

At the end of 2016, the Access to Energy Fund (AEF) had 19 investments in portfolio with 17 different clients. AEF's fund capital has grown to EUR 79.3 mln at December 31, 2016 (EUR 61.4 mln at December 31, 2015) with total DGIS contribution of EUR EUR 60.8 mln. Two new equity investments were contracted as well as three new convertible grants (including two grants on behalf of Climate Investor One).

Production

Client
Mobisol
Contracted on
14 November 2016



AEF invested EUR 7.43 mln in Mobisol, representing a 7.8% equity stake. Mobisol is a leading off-grid pay-as-you-go energy provider, with its headquarters in Germany and operations in Africa. MASSIF is also investing EUR 1.7 mln equity in the same transaction. Mobisol sells and finances larger solar home systems to lower income households in East Africa, offering an affordable alternative to fossil fuels, with a view to providing these households with full electrification. Driven by innovation, Mobisol's 'all-in-one' offer combines solar energy with mobile technology and mobile payment to effectively electrify remote or underserved categories of population with high-quality solar solutions. FMO will be investing up to EUR 9 million along with Investec Africa Private Equity Fund 2, Investec Asset Management's second fund, to provide the company with the necessary capital to strengthen the company's financial sustainability and make it a significant player in the market.

Client
BIX Capital
Contracted on
19 December 2016



AEF entered a USD 5 mln commitment to allow BIX to provide loans to SMEs. BIX is a joint Shell Foundation / Cardano Development initiative aiming to increase access to essential household products and services (predominantly cook stoves, bio-digesters and water-purifiers) to the bottom of the pyramid, by providing impact-based pre-finance. BIX provides finance in the value chain up front in exchange for a preferential claim on the future impact certificate revenue (carbon credits) to redeem the funding. BIX uses an innovative and catalytic concept that monetizes the impact potential of the products when used on a regular basis at scale. Impacts can be environmental, such as reduced Greenhouse gasses (GHG), and also social, such as improved health and education, although methodologies on the latter still need to be further developed. The envisaged split of the BIX portfolio will be at least 70 percent African.

(Convertible) Grants

Climate Investor One

Client
Capas Investment
Contracted on
7 September 2016

A convertible grant contract, financing the development costs of Capas Investment, was closed on 7 September 2016. The investment constitutes of USD 346.8k for development costs of a 25 MWp ground-mounted PV solar project located within Clark Green City, the Philippines. The transaction was sourced by the Climate Investor One ("CIO") team and it will form part of the seed assets of CIO, as per first close of the fund**. The project is expected to connect 45.928 people and will contribute to diversification of energy sources in the Philippines.

Climate Investor One

Client
CDEN Rwanda
Contracted on
20 October 2016

A USD 1.2 mln convertible grant facility was approved in Q4-2016 to fund a maximum of 50% of the combined feasibility study and development costs related to developing a 45MW PV plant and Pump Storage Hydro hybrid energy project in Rwanda. The transaction is a seed investment for Climate Investor One. The transaction is an opportunity to develop a tailored financing structure (funding development and construction) for a hybrid energy solution and we are likely to crowd in investments which would otherwise not have been available to the project.

Client
Riverblade Holdings
Contracted on
20 October 2016

The contract for the feasibility study for Riverblade Holdings (convertible grant of up to EUR 200k) was closed on May 4, 2016. Riverblade is envisaging to develop at least 2 small river-based hydro stations, providing access to energy to around 20,000 people in Sierra Leone, with a total capacity of around 6MW. Should feasibility be confirmed, the project will contribute to increase Sierra Leone's electricity production, which is highly needed. The state-of-the-art feasibility study will give a comprehensive overview on technology, design, hydrology, geology and environmental & social (E&S) aspects. In addition, it will examine and assess potential locations for the power plants to determine the project site(s). FMO will finance 50% of the cost of the study. The remaining 50% will be paid by the Technical Assistance Facility ("TAF") driven by EAIF. The study is expected to be finalized in Q2 2017.

Board Member fees

One new commitment (two grants), totaling EUR 21,000 concerning remuneration and travel costs for board members on the AEF projects of Orb Energy Pte Ltd. and Rabai Power Holdings Ltd. A well-functioning board will be beneficial to AEF’s clients in articulating their strategy, policy formulation, oversight and control, as well as providing accountability. This project centralizes all decision making concerning the nomination of board members with our Corporate Governance Unit, which is in this way able to cover the remuneration fees and costs of FMO’s External Nominee Directors on the boards of AEF’s Investee Companies.

Dutch Business

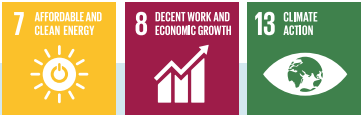
Although it is not a prerequisite to continue executing a transaction, the presence of a Dutch connection in a transaction is regarded as an advantage. Below are the Dutch Business links that have been established as of 2013.

Name	Purpose of Contact	Qualification	
WakaWaka	AEF financed the off grid energy project WakaWaka with a convertible grant to start operations in Rwanda	Developer	Portfolio
Lake Turkana	The largest wind project in Sub-Saharan Africa, developed by Dutch entrepreneurs, was partially financed by the AEF	Developer	Portfolio
Gigawatt Global	Solar project in Rwanda. Royal Haskoning DHV as Lenders’ Technical consultant	Consultant	Portfolio
Riverblade	Three Small Hydros in Sierra Leone	Developer	Portfolio

Events and external network

In 2016, AEF Fund Management has undertaken the following marketing initiatives to promote the fund:

Event	Topic	Role FMO	Location
NL Business Network Event	NL Business support by FMO	Hosting & Organizing this event	FMO, The Hague
Spark, Dutch Approach for Clean Cooking Solutions	Clean Cooking	Hosting of meeting and presentation of State Funds	FMO, The Hague
Monetising Health, Climate and Gender Benefits	Clean Cooking	Attendance	Royal Tropical Institute, Amsterdam
Zakendoen in de Golf, Jordanië en Libanon event	Doing business in the MENA region	Attendance	RVO, Den Haag
Alliance for Renewable Energy Off-Grid Investment Forum	Off-Grid Energy	Attendance	Amsterdam
Bridge the Gap Conference	Gender Equality	Workshop presentation	EY, Amsterdam
Making Solar Bankable	Solar Energy Conference with Solar Plaza	Co-Host of event	Amsterdam
Visit by Director of UN Women	Gender Equality	Hosting, Organizing panel discussion	FMO, The Hague
Transambiental Closing Event	Transambiental Bus project in Cartagena	Participant and acquaintance mayor Cartagena	Cartegena, Colombia
Shell Foundation Event	Off-grid, Clean Cooking and Blending	Participant	London



CLIENT CASE: RIVERBLADE

Capacity Development, for river based hydropower stations in Sierra Leone

The company Riverblade is envisaged to develop two small river-based hydro stations with a total capacity of 6 MW, which constitute the pilot projects of an ambitious hydro energy program in Sierra Leone. AEF supports Riverblade Holding BV through a convertible grant to finance a state-of-the-art feasibility study to determine the potential of river-based hydropower.

The main target of the feasibility study is to assess the bankability, technical feasibility and E&S impact of the Project. The study will determine the location(s) of the first two hydros out of five potential locations. The study will provide further detail on the interconnection and power evacuation plans, while the distance to the existing grid, requirement of new transmission lines and/or off-grid potential will be part of the final site selection criteria. With an installed capacity

of only 83MW, post-Ebola Sierra Leone is in great need of electricity and private investment. Access to electricity in the country is restricted to the main urban centers, where it still remains limited. Riverblade’s river-based hydro stations 2X3MW are marked as high impact transactions as they will provide access to clean electricity to approximately 20,000 people. At a later stage, it is the intention to scale up the number of hydros in different part of the country

up to a joint capacity of around 75MW, thereby contributing to the electrification of rural areas. The projects perfectly suits AEF’s risk appetite and strategy for providing long-term sustainable energy in Sub-Saharan Africa countries. Moreover, Riverblade is an initiative of two Dutch entrepreneurs and hence also fits in with FMO’s Dutch interest strategy.

At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever legally binding global climate deal. The agreement sets out a global plan to avoid dangerous climate change by limiting global warming to below 2°C. The Netherlands has signed this deal and is committed to reduce CO₂ emissions. High on the agenda of the Netherlands as well is increasing access to renewable energy, which matches perfectly with the Sustainable Development (“SDG”) Goal 7 - Affordable & Clean Energy; ensure access to affordable, reliable, renewable energy for all.

A platform for private investors leveraged by limited amounts of public finance

Many governments have established public investment frameworks to support CO₂ reduction and increase access to renewable energy (SDG7). However, finance for these projects remains a challenge. The scale of investments needed in developing countries cannot come from public sources alone and a vast bulk of investment is needed from the private sector. Unfortunately, too little private funding sources are made available resulting in a financing gap. One of the main barriers

for the private sector to invest is the lack of bankable projects in development phase since these projects do not meet their risk – return criteria. Climate Investor One (“CIO”) has been designed to overcome these barriers and address the lack of appropriate private financing solutions for renewable energy projects in emerging markets. The Facility CIO offers an innovative, complete lifecycle financing solution, providing different financing windows to both public and private sector investors.

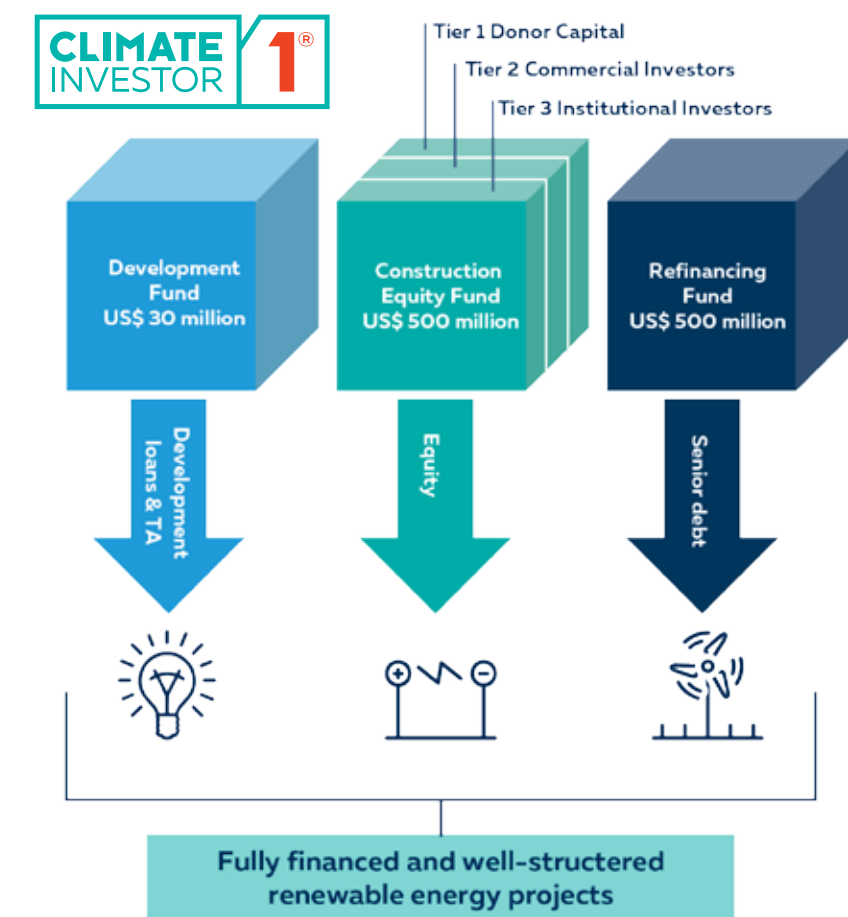
The CIO Facility comprises three distinct but inter-linked funds:

1. A USD 50mln CIO Development Fund;
2. A USD 500mln CIO Construction Equity Fund (comprising 3 individual tranches: Tier 1, Tier 2 and Tier 3); and
3. A USD 500mln CIO Refinancing Fund.

At an early project stage, the Facility will provide technical support and project development funding through the CIO Development Fund (funded by Donors). The CIO Facility then cuts out complex negotiations with multiple providers by fully equity financing a large part of construction costs through the CIO Construction Equity Fund (funded by Donors, DFIs and institutional investors). Finally, the CIO Facility allows debt to be raised after the project is operational at a lower cost through the CIO Refinancing Fund (funded by institutional investors).

The overall goal of Climate Investor One is to develop and construct 20 mid-size renewable energy projects as a means to reduce poverty by increasing the number of people with access to renewable energy and mitigate climate change in developing countries. Its financing strategy is to create a platform for private investors leveraged by limited amounts of public finance. The Dutch Government, through FMO, is going to participate in the CIO Development Fund and in Tier 1 of the CIO Construction Equity Fund. On March 9, 2017, The Minister of BHOS has approved to allocate EUR 32mln from the AEF to Climate Investor One, together with EUR 18mln from additional sources by DGIS. This means a total investment of *EUR 50mln by DGIS.

*Please note that in March 2015, approval was given to allocate EUR 6mln for investments that fit CIO and max. EUR 1mln for 2 FTE's to work on investments and give CIO a flying start, out of the AEF. These EUR 7mln are included in the above-mentioned EUR 50mln.





CLIENT CASE: KIVUWATT

Untapping the potential of Lake Kivu

In 2011 only 6% of Rwandese households were connected to the national grid. Rwanda’s total installed capacity is 85 MW of which 63 MW was available. The Rwandan energy landscape is dominated by hydro power plants, although a substantial portion of power is still generated by Heavy Fuel Oil/diesel fired power plants.

An integrated front-running facility
FMO financed the development, construction and operation of an integrated gas-to-power project of an approximately 100 MW Power plant, a Marine Landing Site and four Gas Extraction Facilities at Kibuye, Lake Kivu, Rwanda. Methane gas is produced by bacteria in the lake. This is a normal process, but goes quicker as the water is warmer because of its close location to volcanoes. Because the temperature of the water is lower at higher water levels, the water can contain less gas at these higher water levels. The result is a layer that keeps the gas dissolved in the

lake. The water containing gas is driven up 350 meter long risers, and the gas is separated from the water at a barge. The degassed water is re-injected into the lake, while the gas is treated in a gas processing plant that is located on the barge, before being transported on shore to the power plant via submerged floating pipeline and used to fuel the power plant with this gas extraction.

Contribution to electrification and market development in Rwanda
The project constituted the first Independent Power Producer (IPP) in Rwanda and classifies as

high impact on different aspects. Social and environmental impact scored ‘excellent’ as the project allows halting the direct emission of methane in the air, and reduces the risk of uncontrolled lethal gas and/or CO₂ emissions, which posed a severe threat to the population living in the area. In addition, the project increased electrification in Rwanda considerably from 6% to 10%, lowered the cost of electricity, and fostered local markets by enabling a reduction of subsidies to the sector.

Sector: Energy	FMO investment USD 31,25 mln (USD 11,25 mln from the Access to Energy Fund and USD 20 mln from the Infrastructure Development Fund)	Jobs supported · Direct jobs 489 · Direct jobs women 90 · Indirect jobs 110,207 · Indirect jobs women 59,457
Total project size EUR 98.8 million	Year of investment 2011	Avoided GHG emissions (tCO₂eq) · 125,372
Amount arranged USD 50.75 million (AfDB USD 25mln, BIO USD 10 mln, EAIF USD 25 mln)	Instrument Senior secured loan	People reached · 782,591 people reached
	Tenor 15 years	
	Installed capacity 25 MW	

ACCOUNTING POLICIES

Basis of preparation: The “accounting policies” selected and applied by the fund manager are to a large extent in line with IFRS. The main exceptions to IFRS standards are related to a limitation in disclosure of balance sheet and P&L items. The annual accounts are prepared under the historical cost convention, except : equity investments, investment in associates and all derivative instruments that are measured at fair value.

Estimates and assumptions

In preparing the annual accounts management is required to make estimates and assumptions affecting reported income, expenses, assets, liabilities and disclosure of contingent assets and liabilities. Use of available information and application of judgment is inherent to the formation of estimates. Although these estimates are based on management’s best knowledge of current events and actions, actual results could differ from such estimates and the differences may be material to the annual accounts.

The most relevant estimates and assumptions relate to the determination of the fair value of financial instruments based on generally accepted modelled valuation techniques and the determination of the counterparty-specific value adjustments.

Fair value of financial instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When available, the fair value of an instrument is measured by using the quoted price in an active market for that instrument. If there is no quoted price in an active market, valuation techniques are used that maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

Foreign Currency translation

The Fund uses the euro as the unit for presenting its annual accounts. All amounts are denominated in thousands of euros unless stated otherwise. Foreign currency transactions are translated to euro at the exchange rate prevailing on the date of the transaction. At the balance sheet date, monetary assets and liabilities and non-monetary assets that are not valued at cost denominated in foreign currencies are reported using the closing exchange rate.

Exchange differences arising on the settlement of transactions at rates different from those at the date of the transaction and unrealized foreign exchange

differences on unsettled foreign currency monetary assets and liabilities, are recognized in the profit and loss account under ‘results from financial transactions’.

Unrealized exchange differences on non-monetary financial assets (investments in equity instruments) are a component of the change in their entire fair value. For non-monetary financial assets, which are classified as available for sale, unrealized exchange differences are recorded directly in shareholders’ equity until the asset is sold.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

Interest income

Interest income and expense are recognized in the profit and loss account for all interest-bearing instruments on an accrual basis using the ‘effective interest’ method based on the initial fair value at inception. Interest income and expense also include amortized discounts. When collection of loans becomes doubtful, value adjustments are recorded for the difference between the carrying values and recoverable amounts. Interest income is thereafter recognized based on the original effective yield that was used to discount the future cash flows for the purpose of measuring the recoverable amount.

Fee and commission income

The Fund earns fees from a diverse range of services. The revenue recognition for financial service fees depends on the purpose for which the fees are charged and the basis of accounting for the associated financial instrument. Fees that are part of a financial instrument carried at fair value are recognized in the profit and loss account. Fee income that is part of a financial instrument carried at amortized cost can be divided into three categories:

1. Fees that are an integral part of the effective interest rate of a financial instrument
2. Fees earned when services are provided
3. Fees that are earned on the execution of a significant act

Dividend income

Dividends are recognized in dividend income when a dividend is declared. The dividend receivable is recorded at declaration date, taking the uncertainties of collection into account.

Cash and cash equivalents

Cash and cash equivalents consist of banks (assets and liabilities) and short-term placements. Short-term deposits are designated at fair value. Unrealized gains or losses of these short-term deposits (including foreign exchange results) are reported in the results from financial transactions.

Loans to the private sector

Loans originated by the Fund include loans to the private sector in developing countries for the account and risk of the Fund;

- Loans are recognized as assets when cash is advanced to borrowers. Loans are initially measured at cost, which is the fair value of the consideration paid, net of transaction costs incurred. Subsequently, the loans are valued at amortized cost using the effective interest rate method.
- Interest on loans is included in interest income and is recognized on an accrual basis using the effective interest rate method. Fees relating to loan origination and re-financing are deferred and amortized to interest income over the life of the loan using the effective interest rate method.

Value adjustments on loans

At each reporting date FMO assesses the necessity for value adjustments on loans. Value adjustments are recorded if there is objective evidence that FMO will be unable to collect all amounts due according to the original contractual terms or the equivalent value. The value adjustments are evaluated at a counterparty-specific level based on the following principles: Individual credit exposures are evaluated based on the borrower’s characteristics, overall financial condition, resources and payment record, original contractual term, exit possibilities and, where applicable, the realizable value of the underlying collateral. The estimated recoverable amount is the present value of expected future cash flows, which may result from restructuring or liquidation. In case of a loan restructuring, the estimated recoverable amount as well as the value adjustments are measured by using the original effective interest rates before the modification of the terms. Value adjustments for credit losses are established for the difference between the carrying amount and the estimated recoverable amount.

A value adjustment is reported as a reduction of the asset’s carrying value on the balance sheet. All loans are reviewed and analysed at least annually. Any subsequent changes to the amounts and timing of the expected future cash flows compared to prior estimates will result in a change in the value adjustments and will be charged or credited to the profit and loss account. A value adjustment is reversed only when the credit quality has improved to the extent that reasonable assurance of timely collection of principal and interest is in accordance with the original or revised contractual terms.

A write-off is made when all or part of a claim is deemed uncollectible or forgiven. Write-offs are charged against previously recorded value adjustments. If no value adjustment is recorded, the write-off is included

directly in the profit and loss account under the line item ‘value adjustments’.

Equity investments

Equity investments in which the Fund has no significant influence are classified as available for sale assets and are measured at fair value. Unrealized gains or losses are reported in the available for sale reserve net of applicable income taxes until such investments are sold, collected or otherwise disposed of, or until such investment is determined to be impaired. Foreign exchange differences are reported as part of the fair value change in shareholders’ equity. On disposal of the available for sale investment, the accumulated unrealized gain or loss included in fund capital is transferred to profit and loss.

Impairments

All equity investments are reviewed and analysed at semi-annually. An equity investment is considered impaired if its carrying value exceeds the recoverable amount by an amount considered significant or for a period considered prolonged. If an equity investment is determined to be impaired, the impairment is recognized in the profit and loss account as a value adjustment. The impairment loss includes any unrealized loss previously recognized in fund capital. The impairment losses shall not be reversed through the profit and loss account except upon realization. Accordingly, any subsequent unrealized gains for impaired equity investments are reported through shareholders’ equity in the available for sale reserve.

Investment in associates Equity

Equity investments in companies in which The Fund has significant influence (‘associates’) are accounted for under the equity accounting method. Significant influence is normally evidenced when The Fund has from 20% to 50% of a company’s voting rights unless:

1. The Fund is not involved in the company’s operational and/or strategic management by participation in its Management, Supervisory Board or Investment Committee; and
2. There are no material transactions between The Fund and the company; and
3. The Fund makes no essential technical assistance available.

Investments in associates are initially recorded at cost and the carrying amount is increased or decreased after the date of acquisition to recognize The Fund’s share of the investee’s results or other results directly recorded in the equity of associates.

Available for sale reserve (AFS reserve)

The available for sale reserve includes net revaluations of financial instruments classified as available for sale that have not been reported through the profit and loss account.

Undistributed results previous years

The undistributed results consists of the part of the annual results that The Fund is accumulating to maintain the revolvability of the funds.

BALANCE SHEET AEF I

At December 31, 2016

	31/12/2016	31/12/2015
Assets		
Banks	12,669	9,933
Loans guaranteed by the State	29,323	23,234
Equity investments & Investments in associates	30,542	20,790
Accrued income & Other receivables	598	908
Total assets	73,132	54,865
Liabilities		
Banks	0	0
Current account with FMO	407	0
Accrued liabilities & Other liabilities	513	668
Total liabilities	920	668
Fund capital		
Contribution DGIS previous years*	45,819	45,819
Contribution DGIS current year*	7,500	0
Total contribution DGIS	53,319	45,819
Available for sale reserve	9,686	6,204
Undistributed results previous years	5,189	3,464
Result current year	8,783	1,724
Grants	-4,102	-2,455
Evaluation costs	-663	-559
Total fund capital	72,212	54,197
Total liabilities and shareholders' equity	73,132	54,865
Irrevocable facilities	24,756	24,583
Total subsidy amount AEF I according to "Beschiiking"	70,000	70,000
Total subsidy received from DGIS for fund	53,319	45,819
"Beschikkingsruimte"	16,681	24,181

BALANCE SHEET AEF II

At December 31, 2016

	31/12/2016	31/12/2015
Assets		
Banks	769	912
Loans guaranteed by the State	0	0
Equity investments & Investments in associates	6,315	6,315
Accrued income & Other receivables	0	0
Total assets	7,084	7,226
Liabilities		
Banks	0	0
Current account with FMO	-13	0
Accrued liabilities & Other liabilities	38	42
Total liabilities	25	42
Fund capital		
Contribution DGIS previous years*	7,501	7,501
Contribution DGIS current year*	0	0
Total contribution DGIS	7,501	7,501
Available for sale reserve	0	0
Undistributed results previous years	-300	-143
Result current year	-125	-157
Grants	-17	-17
Evaluation costs	0	0
Total fund capital	7,059	7,184
Total liabilities and shareholders' equity	7,084	7,226
Irrevocable facilities	3,685	3,718
Total subsidy amount AEF II according to "Beschiiking"	32,000	32,000
Total subsidy received from DGIS for fund	7,501	7,501
"Beschikkingsruimte"	24,499	24,499

STATEMENT OF COMPREHENSIVE INCOME AEF I

At December 31, 2016

	31/12/2016	31/12/2015
Income		
Interest income	2,780	2,957
Results from equity investments and associates	0	77
Results from financial transactions	0	0
Dividend, Fee and Commission income	252	1,604
Fx loans	956	2,527
Fx other	188	1,166
Other income	0	0
Total income	4,176	8,331
Expenses		
Remuneration FMO	-1,966	-1,466
Other operating results	0	0
Total expenses	-1,966	-1,466
Value adjustments, impairments and grants		
Value adjustments on loans	6,573	-5,141
Impairments on equity investments	0	0
Total value adjustments, impairments and grants	6,573	-5,141
Net profit	8,783	1,724
Other comprehensive income		
Available for sale equity investments	3,482	6,656
Other comprehensive income	3,482	6,656
Total comprehensive income	12,265	8,380

STATEMENT OF COMPREHENSIVE INCOME AEF II

At December 31, 2016

	31/12/2016	31/12/2015
Income		
Interest income	-2	12
Results from equity investments and associates	0	0
Results from financial transactions	0	0
Dividend, Fee and Commission income	0	0
Fx loans	0	0
Fx other	28	0
Other income	0	0
Total income	26	12
Expenses		
Remuneration FMO	-151	-169
Other operating results	0	0
Total expenses	-151	-169
Value adjustments, impairments and grants		
Value adjustments on loans	0	0
Impairments on equity investments	0	0
Total value adjustments, impairments and grants (loss)	0	0
Net profit	-125	-157
Other comprehensive income		
Available for sale equity investments	0	0
Other comprehensive income	0	0
Total comprehensive income	-125	-157

STATEMENT OF CASH FLOWS AEF I

At December 31, 2016

	31/12/2016	31/12/2015
Cash flow from operating activities		
Inflows		
Interest received on loans	2,523	2,195
Repayments on loans	4,099	3,827
Repayment on grants	301	383
Sales of equity instruments (book value)	15	872
Results from equity investments	0	77
Sales to FMO (book value)	0	0
Results from sale to FMO	0	0
Results from grants	0	0
Dividends and fees received	165	1,645
Other received amounts	381	1,074
Outflows		
Disbursements on loans	-2,597	-684
Investments in equity instruments	-6,283	-7,057
Disbursements on grants	-1,647	-343
Other paid amounts	-163	-283
Net cash from operating activities	-3,206	1,706
Cash flow from financing activities		
Inflows		
Contribution of DGIS	7,500	0
Outflows		
Remuneration FMO	-1,966	-1,466
Net cash from financing activities	5,534	-1,466
Net change in cash & cash equivalents	2,328	240
Position of cash at January 1	9,933	9,693
Cash at end of period	12,261	9,933

STATEMENT OF CASH FLOWS AEF II

At December 31, 2016

	31/12/2016	31/12/2015
Cash flow from operating activities		
Inflows		
Interest received on loans	0	0
Repayments on loans	0	0
Repayment on grants	0	0
Sales of equity instruments (book value)	0	0
Results from equity investments	0	0
Sales to FMO (book value)	0	0
Results from sale to FMO	0	0
Results from grants	0	0
Dividends and fees received	0	14
Other received amounts	28	6
Outflows		
Disbursements on loans	0	0
Investments in equity instruments	0	0
Disbursements on grants	0	0
Other paid amounts	-7	0
Net cash from operating activities	21	20
Cash flow from financing activities		
Inflows		
Contribution of DGIS	0	0
Outflows		
Remuneration FMO	-151	-169
Net cash from financing activities	-151	-169
Net change in cash & cash equivalents	-130	-149
Position of cash at January 1	912	1,060
Cash at end of period	782	912

RISK MANAGEMENT

ORGANIZATION OF RISK MANAGEMENT

In order to be able to carry out the Fund’s strategy, it is essential for FMO in its role as Fund Manager to have an adequate risk management system in place to identify, measure, monitor and mitigate financial risks. AEF (hereafter ‘the Fund’) has a pre-defined risk appetite translated into limits for exposure to regions, countries, sectors, tenor. Limit usages are monitored by the Fund Manager on a monthly basis and for each proposed transaction.

The Fund Manager reviews each transaction and provides consent to eligible proposals. The Investment Committee, comprising of senior representatives of several departments, reviews financing proposals for new transactions. Each financing proposal is assessed in terms of specific counterparty, product risk as well as country risk. All financing proposals are accompanied by the advice of the Credit department. This department is responsible for credit risk assessment of both new transactions and the existing portfolio. For small exposures, Credit department has the authority to review new transactions.

In addition, financial exposures in emerging markets are subject to a periodic client review, which are in general executed annually. Exposures requiring specific attention are reviewed by the Investment Review Committee. The large and higher risk exposures are accompanied by the advice of the Credit department. If the Investment Review Committee concludes that a client has difficulty in meeting its payment obligations, the client is transferred to the Special Operations department – responsible for the management of distressed assets – where it is intensely monitored.

RISK PROFILE & APPETITE

The Fund actively seeks to take risk stemming from debt and equity investments in private institutions in developing countries. This risk profile is supported by holding prudent levels of capital and liquidity and strong diversification of the portfolio over regions and sectors.

Capital Management

The Fund aims to optimize development impact. This can only be achieved with a sound financial framework in place, combining a healthy long-term revolvability of ≥75% and sound capital adequacy. Therefore, FMO seeks to maintain a strong capital position for the Fund. The Fund’s structure is based on a 100% contribution from the Dutch government. Total contribution to AEF I and II from the Dutch government is EUR 60.8 mln at 31 December 2016 (31 December 2015: 53.3 mln). Total fund capital – which is the sum of the contribution by the government, the available for sale reserve, undistributed results from previous years, results from the current year, grants, and evaluations costs – increased to EUR 79.3 mln in 2016 (2015: EUR 61.4 mln).

REPUTATIONAL RISK

The Fund’s investments in developing and emerging markets are exposed to reputational risks such as environmental and social risks and various types of legal risks. The Fund has a limited appetite for reputation risk when such risks would prompt key stakeholders to intervene in the decision making or running of our daily business. Outside of this the Fund has a moderate appetite for reputation risk, accepting that reputational impacts of activities may incidentally lead to negative press coverage, NGO attention, client feedback, or isolated cases of financial losses, as long as these activities at the outset have a clear expected contribution to FMO’s goal to achieve development impact with the Fund. FMO cannot fully avoid such risks due to the nature of its operations, but chooses to mitigate them as much as possible through strict policies, upfront assessment and, when necessary, through agreements with the Fund’s clients. FMO manages issues from the perspective of learning lessons and prevention. Through transparency and a willingness to respond to challenges made, we aim to remain accountable and reduce our reputational risk.

Environmental, social and governance risk

The Fund runs environmental and social risks in its emerging market projects. These risks stem from the nature of our projects, which in some cases could carry negative environmental and/or social impacts. The Fund accepts that in the pursuit of development impact there is a risk of negative press and/or negative reactions from NGOs in the context of ESG performance and mitigates this risk through environmental and social action plans and monitoring. The risk appetite for deviations from the exclusion list and human rights violations by projects financed by the Fund is zero. Internally, FMO strives to limit the footprint of its own workplace and strives to the highest standards in employee satisfaction. Ensuring a high diversity in staff is a leading Human Resources principle.

CREDIT RISK

Credit risk is defined as the risk that the Fund will suffer economic loss because a counterparty cannot fulfil its financial or other contractual obligations arising from a financial contract. Credit risk is the main risk within the Fund and occurs in two areas of its operations: (i) credit risk in investments in emerging markets and off-balance instruments such as loan commitments and guarantees; and (ii) credit risk in the treasury portfolio, only consisting of bank accounts and money market instruments.

Management of credit risk is FMO’s core business, both in the context of project selection and project monitoring of Fund Investments. In this process, a set of investment criteria per sector is used that reflects benchmarks for the required financial strength of the Fund’s clients. This is further supported by internal scorecards that are used for risk classification and the determination of capital use per transaction. As to project monitoring, the Fund’s clients are subject to periodic reviews. Strong diversification within the Fund’s emerging market portfolio is ensured through stringent limits on individual counterparties (single client limit of 10% of the Fund’s capital), countries (single country limit of 40% of the Fund’s capital), continents¹⁾ (as per 2012 100% of the Fund’s capital has to be invested in Sub Sahara Africa), sectors (as per 2012 100% of the Fund’s capital has to be invested in renewable energy), maximum tenor 20 years.

Credit risk in the emerging markets loan portfolio

The Fund offers loans in emerging market countries. Concentration risks on individual counterparties, sectors or countries are mitigated due to stringent single client, sector and country limits.

Internal credit approval process

Credit risk from loans in emerging market countries arises from a combination of counterparty risk, country risk and product specific risks. These types of risk are assessed during the credit approval and credit review process and administrated via internal scorecards. The lending process is based on formalized and strict procedures. Decisions on authorizations depend on both the amount of economic capital and the risk profile of the financing instrument. For distressed assets, the Special Operations department applies an advanced workout and restructuring approach.

In measuring the credit risk of the emerging market portfolio at counterparty level, the main parameters are the credit quality of counterparties and the expected recovery ratio in case of defaults. Counterparty credit quality is measured by scoring counterparties on various dimensions of financial strength. Based on these scores, FMO assigns ratings to each counterparty on an internal scale from F1 (lowest risk) to F21 (highest risk), equivalent from AAA to CCC ratings.

Gross exposure AEF portfolio distributed by internal ratings²⁾

Indicative counterparty credit rating	2016	AEF%	FMO-A
F1-F10 ³⁾ (BBB- and higher)	0	0	5,4
F11 – F13 (BB-, BB, BB+)	€419,254	1,1	37,5
F14 – F16 (B-, B, B+)	€31,490,954	83,9	41,4
F17 and lower(CCC+ and lower ratings)	€5,621,347	15,0	15,7
Total ⁴⁾	€37,531,555	100	100

¹⁾ Please note that this regional restriction has only been put in place as per 2013. Projects in the portfolio outside SSA date from before 2013.

²⁾ Please note that this does not include the entire portfolio. Equity investments are not rated. In addition, there are some other cases in which it may not be possible to make a rating for a client.

³⁾ Please note that for AEF this only concerns F10 investments.

⁴⁾ Please note that this concerns only 64.2% of total AEF gross outstanding. The complementary 35.8% has not been received a counterparty credit rating.

The bulk of AEF’s exposure (84%) is in the F14 to F16 ratings. The exposure to counterparties rated F17 concerns 1 investment in Nicaragua (F18).

Loans past due and value adjustments

Non-Performing Loans (NPL) are defined as loans with a counterparty-specific value adjustment and/or loans with interest and/or principal payments that are past due 90 days or more. AEF's NPL ratio decreased from 50.8% YE 2015 to 18.0% as per YE 2016 as a result of decreased provisioned loans. There is only 1 loan remaining in the NPLs, Polaris in Nicaragua representing EUR 5.6 mln. At the end of 2016, the counterparty-specific value adjustments as a percentage of the gross loan portfolio equalled 4.5%.

When the terms and conditions of a loan have been modified significantly, FMO considers these loans as restructured. Changes in terms and conditions usually include extending the maturity, changing the interest margin and changing the timing of interest payments. The loans are assessed to determine if they qualify for de-recognition and if that is the case, they are recognized as a new loan with valuation differences through profit and loss. Value adjustments related to restructured loans are being measured as indicated in the accounting policies under 'Value adjustments on loans'.

In 2016, like in 2015, there were no (partial) write-offs in the AEF portfolio.

Loans due and value adjustments 2016

Quality loan portfolio at December 31, 2016	Loans not value adjusted	Loans value adjusted	Gross exposure	Counterparty specific value adjustment	Total
Loans not past due	25,5	5,6	31,1	(1,4)	29,7
Loans past due:					
· Past due up to 30 days					
· Past due 30-60 days					
· Past due 60-90 days					
· Past due more than 90 days					
Subtotal	25,5	5,6	31,1	(1,4)	29,7
Less: amortizable fees	(0,3)	(0,1)	(0,4)		(0,4)
Net	25,2	5,5	30,7	(1,4)	29,3
Number of non-performing loans	1				
Value adjustments / loans	4,5%				
NPL percentage	18,0%				

Country risk

Country risk arises from country-specific events that adversely impact the Fund's exposure in a specific country. Within FMO, country risk is broadly defined. It includes all relevant factors that have a common impact on the Fund's portfolio in a country such as economic, banking and currency crises, sovereign default and political risk events. The assessment of the country rating is based on a benchmark of external rating agencies and other external information.

The level of the country limits depends on the sovereign rating. FMO recognizes that the impact of country risk differs across the financial products it offers. In 2016 the ratings of Nigeria, and Rwanda were downgraded from F14 to F15.

Overview country ratings

Indicative external rating equivalent	2016 (AEF%)	FMO-A
F9 and higher (BBB and higher ratings)	0	8,2
F10 (BBB-)	8,13	12,8
F11 (BB+)	0	7,4
F12 (BB)	0	7,0
F13 (BB-)		9,5
F14 (B+)	13,96	21,9
F15 (B)	60,04	12,4
F16 (B-)	12,28	7,9
F17 and lower (CCC+ and lower ratings)	5,59	12,9
Total	100	100

Treasury counterparty credit risk

Credit risk in the treasury portfolio stems from bank account holdings and placements in money market instruments to manage the liquidity in the Fund. The Risk Management department approves each obligor to which the Fund is exposed through its treasury activities and sets a maximum limit to the credit exposure of that obligor. FMO pursues a conservative investment policy.

EQUITY RISK

With regard to equity risk that results from equity investments, a distinction can be made between:

- Exit risk, the risk that FMO's equity stake cannot be sold for a reasonable price and in a sufficiently liquid market;
- Equity risk, the risk that the fair value of an equity investment decreases.

The Fund has a long-term view on its equity portfolio, usually selling its equity stake within a period of 5 to 10 years. The Fund can accommodate an increase in the average holding period of its equity investments and so wait for markets to improve again to realise exits. We have no deadlines on the exit date of our equity investments. Equity investments are assessed by the Investment Committee in terms of specific obligor as well as country risk. The Investment Review Committee assesses the valuation of the majority of equity investments quarterly. The performance of the equity investments in the portfolio is periodically analyzed during the fair value process. Based on this performance and the market circumstances, exits are pursued in close cooperation with our co-investing partners. The total outstanding equity portfolio at December 31, 2016, amounts to €36.9 mln (2015: €27.1 mln) of which €3.7mln (2015: €2.7 mln) is invested (outstanding portfolio) in investment funds.

In recent years FMO has further improved its valuation process for equity investments and in addition more reliable information has become available. As per December 2015 a part of the equity investments were measured at cost price as best estimate for fair value. As of first half of 2016 FMO was able to reliably estimate fair value of all its equity investments in the Fund.

CURRENCY RISK

Currency risk is defined as the risk that changes in foreign currency exchange rates have an adverse effect on the value of the Funds financial position and future cash flows.

The Fund offers financing in emerging market currencies. We aim to match the currency needs of our clients, thereby reducing their currency risk. At December 31, 2016 9% (2015: 7,8%) of the net equity exposure to the private sector was in emerging market currencies, related to 1 client and investment.

Interest rate risk

Interest rate risk is the risk of potential loss due to adverse movements in interest rates. Given the balance sheet and capital structure of the Fund, interest rate risks are considered limited. Please note that lower interest base rates could lead to lower revues.

Liquidity risk

Liquidity risk is the risk that insufficient funds are available to meet financial commitments. The Fund has a conservative liquidity management ensuring sufficient liquidity is available. In case of a liquidity shortfall the Fund can make a funding request to FMO for up to a maximum of 10% of the Fund's net portfolio.

OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed processes, people and systems or loss caused by external events. FMO aims to manage operational risk for the Fund in a cost effective way. Operational risks – including related to information security and personal data breach – are identified, measured and controls are implemented and their effectiveness is monitored. Operational risks are managed and monitored in accordance with three lines of Defense governance principle. In the first line of defense business management executes and reviews processes, reports incidents and performs risk and control self-assessments. In the second line of defense monitoring is performed by specialized risk departments and committees and the third line of defense is performed by the Internal Audit function. Although controls are in place, incidents sometimes happen and damage may occur. FMO registers and analyses operational risk events and losses systematically. Analysis of these data triggers actions to improve controls.

Operational risks resulting from new products or activities are considered in FMO’s Product Approval and Review Process. FMO monitors the trends of operational risks, including information security risks and where deemed necessary anticipates on the unfavorable effects.

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