

# ACCESS TO ENERGY FUND

Quarterly report Q3 2016

In many fast-growing developing countries, the demand for electricity continues to rise whilst 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 dark after nightfall. Especially Sub-Saharan Africa has some key issues regarding energy availability. Firstly, access to energy is low due to insufficient capacity. According to the World Bank (2015) only 24% of the Sub-Saharan African population has access to electricity. At the same time, the area deals with poor reliability of the electricity available, especially impacting local African manufacturing enterprises. Power outages are on average experienced 56 days per year. The Access to Energy Fund is a €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.



## **1. FUND OVERVIEW**

#### 1.1 FMO GOVERNMENT FUNDS MANAGEMENT

FMO is the Dutch development bank. FMO has invested in the private sector in developing countries and emerging markets for more than 45 years. Our mission is to empower entrepreneurs to build a better world. We invest in sectors where we believe our contribution can have the highest long-term impact: financial institutions, energy and agribusiness. Alongside partners, we invest in the infrastructure, manufacturing and services sectors. FMO has 4 government funds under its management:

- Access to Energy Fund (AEF) The AEF 'Energy for Growth' funds private sector projects that create sustainable access to energy services.
- Infrastructure Development Fund (IDF) The IDF provides long-term financing for infrastructure projects in low-income countries.
- FOM– FOM stimulates Dutch enterprises to invest in emerging markets (concerns a Guarantee Facility that closed as per 1<sup>st</sup> of July 2016).
- MASSIF: provides financing and technical assistance to microfinance institutions (MFIs), small banks, and private equity funds, supporting access to finance for micro-, small- and medium enterprises (MSMEs).

FMO Government Funds Management	
Assets under management	€ 868.0 mln
Total committed portfolio government funds	€ 1,151.5 mln
Active Funds	4
Active Portfolio companies	181

#### **1.2 FUND KEY FACTS**

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 grants that fulfil the ODA- criteria and the concessional requirements. The goal of the fund is to provide access to energy to at least 3 mln people. In order to reach this goal, € 102 mln funding has been made available by the Dutch Ministry of Foreign Affairs. Since December 2012, the fund is solely focusing on Sub–Saharan Africa, specifically targeting affordable, clean and renewable off-grid energy solutions (75% of the outcomes). Chapter two will provide a case study of an AEF investee.

Key Facts AEF I & II	Q2 2016
Start of Investment period	2006
End of investment period (AEF I / AEF II)	2018
End of management period	2038
Total funds available according to "Beschikking"	€ 102.0 mln
Total funds received	€ 53.3 mln
Remaining funds available (beschikkingsruimte)	€ 48.7 mln
Total number of investments in both portfolios	18
Total number of countries in both portfolios	11

Two targets have been set regarding AEF impact results. By 2018, AEF investments should have reached 3 million beneficiaries and should have a catalytic effect of 3.25, measured as average over the full portfolio. Based on YTD cumulative impact measurements, both targets will be met by 2018. However, it is good to note that definitions applied to measure these (and other) impact targets are and have been subject to change over the life of the Fund.

In the table below the 2015 impact results of the current portfolio are presented.





JOBS SUPPORTED

Through its investees, **357.2** the AEF supports **8.806** capacity direct jobs (3,947 installed. female) and **1.001.514** indirect jobs (451k female) in developing countries.

INSTALLED CAPACITY 357.2 MW

/ has





FINANCE CATALYZED PEOPLE REACHED

power With its commitments of An estimated **26.4 mln** been € 79 mln, the fund people have been catalyzed € **1.571mln** reached so far with **public** and € **891mln** improved access to **private** finance<sup>1</sup>. energy sources.

In 2015 FMO and DGIS have agreed on a revised version of the definitions of the impact indicators, creating more aligned and accurate data quality and reporting methodology. For a holistic overview of the impact so far created, the reporting shall include the cumulative impact over the 'lifetime' of the funds (of the total portfolio level). See the annex for a specification of the definitions.

Please be advised that the definitions and assumptions underlying above reported numbers are subject to ongoing discussions with the State. A meeting has taken place in October 2016 to further align definitions (to be) used. Above mentioned results are aligned with what has been reported in the 2015 Resultatenfiche.

<sup>&</sup>lt;sup>1</sup> Please note that these catalyzed amounts include all finance made available through public and commercial parties in the

#### **1.4 PORTFOLIO OVERVIEW**

The AEF has a diverse sector break down in the energy industry. Solar, hydro and wind energy take up 40% of the total portfolio. 31.7% of total portfolio is invested in other/mixed renewable energy. The fund is predominantly active in Africa (85.6%), as the fund has been restricted to invest solely in Sub Sahara Africa since December 2012. A relatively large share of commitments is in equity (57.6%).

Current Portfolio breakdown AEF I and II (in € mIn)	Q3-2016
Committed portfolio	€ 77.2
Outstanding portfolio	€ 58.6
Committed not disbursed	€ 18.7
Value Adjustments and amortized costs	€ 6.5
Net Portfolio	€ 55.5



#### **1.5 PERFORMANCE AND REVOLVABILITY**

52.3% of the two AEF funds have been drawn from DGIS. The funds have a Residual Value over Total Funds received from investors ("RVPI") of 122.5%.

The RVPI sets off the total outstandings against total funds received from DGIS. If the funds will be liquidated, a positive result of 22.5% would be made. This is a measure of revolvability and implies AEF can take more risk. AEF has a revolvability taget of 75%, meaning that every €1 invested should generate sufficient interest income and principal repayments to allow € 0.75 to be reinvested.

FMO is actively seeking higher risk and high impact transactions for AEF, especially in the off-grid space.

Performance and Revolvability	
Total Funds received from DGIS to Committed Capital by DGIS	52.3%
Residual Value over Total Funds received from investors <sup>2</sup>	122.5%

<sup>&</sup>lt;sup>2</sup> This ratio benchmarks the current net value of the fund to the total funds placed in the fund over time. Any value above 100% indicates that the fund is revolvable. This ratio is calculated by dividing the net asset value of the fund by the cumulative capital placed in the fund.

## 2. CLIENT CASE CONSORCIO EOLICO AMAYO II RENEWABLE ENERGY FOR NICARAGUA



### SUPPLYING POWER IN A CHALLENGING REGION

Nicaragua had the lowest power generation capacity per capita in Central America, leading to frequent black-outs.

Heavy fuel-oil or diesel units provided a quick, but costly and environmentally unfriendly solution in emergencies. Fossil fuels accounted for two thirds

of the total generation capacity, which was the highest in the region despite the cheaper renewable energy options available to the country.

The Wind farms, located on the shores of Lake Nicaragua, were the first wind projects in FMO's portfolio.

#### **EOLO & AMAYO – WINDS OF CHANGE**

Amayo was the first wind energy project FMO financed. A proven technology with a good financial profile made it possible to enter this segment. Onshore wind projects have the advantage of being quickly installable, scalable over time, and having a long economic life of over 20 years. The short construction period enable generation of income within a year of the investment.

On an aggregated basis, the 33 wind turbines increased the country's installed capacity by 8%, providing access to electricity for an equivalent of nearly 500,000 people.

Wind provides greener and cheaper energy, leading to cost savings of 40 - 65% compared to fossil fuel prices (at the time of financing).

#### SOLID APPROACH, SOUND PARTNERS

The projects constitute valid examples of collaboration between strong sponsors, qualified technical providers and reliable off-takers.

Amayo's sponsor is IC Power, which owns and operates power generation assets in emerging markets.

The proven scalability, velocity of installation, and long economic life of onshore wind projects allowed the project to achieve a good and stable financial performance within a year of the investment.

The wind farms have contributed to Nicaragua's spectacular energy transformation. In 2014 Nicaragua generated an average of 50% of its electricity from renewable sources.

#### **COMPANY INFORMATION**

#### NAME

Consorcio Eólico Amayo II (AMAYO)

COUNTRY Nicaragua

SECTOR Renewable Energy

TYPE OF BUSINESS Wind farm

#### **INVEST INFORMATION**

FMO INVESTMENT AMAYO USD 3 mIn Subordinated Loan AEF USD 15 mIn Senior Loan FMO-A

TOTAL PROJECT SIZE USD 60 mln

FINANCIAL PRODUCTS USED

#### **IMPACT INFORMATION**



## **ANNEX 1 INDICATORS**

AEF Indicators		
	FORMULA	SOURCE
Beneficiaries Reached	Equivalent number of people served via power generation projects, calcu- lated as: Annual amount of electric energy delivered to off-taker(s) during the reporting period, divided by do-	FMO Impact scoring tool
Installed Capacity	mestic electricity usage per capita. Capacity of (renewable / non-renewa- ble) energy plant(s) constructed or re- habilitated in MW	Independent engineering consult- ant's report
Direct employment supported	An estimation of the total number of full-time equivalent employees (as per local definition) working for the client company or project that is required to support investment induced additional production.	Latest available audited annual re- port. If the number of employees is not included in the Annual Report: Im- pact Reporting Template.
Direct Employment supported - Women	Estimation of number of full-time equivalent female employees as per local definition working for the project based on female participation rates by country and sector.	FMO Female Employment Estima- tion tool
Indirect employment supported	Defined as the sum of: - Indirect jobs (backward): Total FTEs at the client/end beneficiary's direct and indirect suppliers that are related to FMO's financing. - Induced jobs: Total FTEs related to te re-spending of salaries earned by employees of the FMO client/end beneficiary and its (in)direct suppliers that are related to FMO's financing. - Forward linkage jobs: Jobs that are supported at direct consumers of electricity/infrastructure that can be related to FMO's project finance in- vestments	FMO Impact Model
Indirect Employment supported - Women	Estimated number of indirect jobs for women based on female participation rates by country and sector.	FMO Female Employment Estima- tion tool
Catalytic effect	Amount of commercial financing in the project or fund. The scope is lim- ited to the financing round in which AEF takes part. "Commercial financ- ing" refers to financing from a com- mercial party: all except governments, DFIs and NGOs." So without	Legal documents or financial model
Gross Installed Electricity Ca- pacity	Capacity of energy plant(s) con- structed or rehabilitated (MW).	Independent engineering consult- ant's report
Total power production (GWh per year)	Energy delivered to offtaker(s) during the reporting period.	<u>At contracting</u> : Independent engi- neering consultant's report <u>At review:</u> Annual operational re- port.
Annual avoided GHG emis- sions	The difference between the project GHG emissions and a baseline sce- nario. This reference scenario may be either a "without project" scenario or an "alternative scenario" that reflects the most likely alternative means of achieving the same project outcomes or level of service.	Independent engineering consult- ant's report or FMO Impact scoring tool



DEARAM



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