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This action is funded by the European Union

ANNEX 3

of the Commission Decision on the Annual Action Programme 2017 (Part 1)
in favour of the Republic of Zambia

Action Document for Contribution to the African Investment Facility: ElectriFI – Zambia window

1. Title/basic act/ CRIS number	Contribution to the African Investment Facility: ElectriFI – Zambia window CRIS number: ZM/FED/039-860 financed under the 11 th European Development Fund	
2. Zone benefiting from the action/location	Eastern Africa, Southern Africa and the Indian Ocean, Zambia The action shall be carried out at the following location: Zambia.	
3. Programming document	11 th EDF, National Indicative Programme (2014-2020) for co-operation between the Republic of Zambia and the European Union.	
4. Sector of concentration/ thematic area	Energy	DEV. Aid: YES
5. Amounts concerned	Total amount of EDF contribution: EUR 40 000 000. This action shall be co-financed by entities and for amounts specified in the indicative project pipeline which is an appendix to this Action Document (a leverage of EU Funds minimum 1:6 is sought).	
6. Aid modality and implementation modality	Project Modality This action regarding the African Investment Facility through ElectriFI shall be implemented in indirect management by entities to be indicated in complementary financing decisions at the end of the African Investment Facility award procedure.	
7 a) DAC code(s)	Main DAC sector: 23 – Energy generation and supply Sub-sector 1: 23210 - Energy generation, renewable sources – multiple technologies Sub- sector 2: 23630 - Electric power transmission and distribution Sub- sector 3: 23183 - Energy conservation and demand-side efficiency	
b) Main Delivery Channel	Tbc	

8. Markers (from CRIS DAC form)	General policy objective	Not targeted	Significant objective	Main objective
	Participation development/good governance	x	<input type="checkbox"/>	<input type="checkbox"/>
	Aid to environment	<input type="checkbox"/>	<input type="checkbox"/>	x
	Gender equality (including Women In Development)	<input type="checkbox"/>	x	<input type="checkbox"/>
	Trade Development	x	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, Maternal, New born and child health	x	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Main objective
	Biological diversity	x	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification	x	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	<input type="checkbox"/>	<input type="checkbox"/>	x
	Climate change adaptation	x	<input type="checkbox"/>	<input type="checkbox"/>
9. Global Public Goods and Challenges (GPGC) thematic flagships	Sustainable Energy, component 1.1: Increased access to sustainable energy/ renewable energy/ energy efficiency, incl. rural electrification			
10. Sustainable Development Goals (SDGs)	Main SDG Goal: 7 – Affordable and Clean Energy Secondary SDG Goal(s): 9 – Resilient infrastructure, inclusive and sustainable industrialization and innovation; 13 – Climate change and its impacts.			

SUMMARY

The aim of this Action is to bridge the gaps in structuring and financing of investments addressing the lack of access to clean, reliable and affordable electricity and energy services by contributing a portion of the 11th EDF National Indicative Programme funding for Zambia to ElectriFI, the EU electrification financial initiative specifically designed and dedicated to accelerate rural electrification worldwide by promoting decentralized renewable energy solutions in partnership with the private sector and other development partners. The ElectriFI for Zambia will be implemented via the African Investment Facility.

This Action will support investments in renewable energy and energy efficiency, with a special focus on mini-grids and rural electrification that demonstrate strong features for sustainability, scalability and/or replicability. In Zambia, some 69% of the population (or over 11 million people) have no access to electricity and at least 500,000 people living in rural areas have access to unreliable electricity networks. In order to make the best use of limited development funding compared to the scale of investment that is needed and leverage substantial private investment in sustainable energy services, it is important to mobilize appropriate and flexible financing schemes tailored to the needs of private investors and granting them access to seed, mid- and long-term capital matching their business cycles, which cannot be obtained from commercial banks which do not have such specialized financial tools at their disposal.

Moreover, it will contribute to deliver on the EU commitment to investing EUR 1.5 billion to support 5GW of new renewable energy by 2020 in the framework of the Africa Renewable Energy Initiative (AREI).

1 CONTEXT

1.1 Sector/Country/Regional context/Thematic area

Sustained economic growth – 7.4% per year on average between 2004 and 2014 – made Zambia reach the lower middle-income status in 2011, this has however not translated into inclusive development. With a Gini index of 0.69 in 2015, Zambia is amongst the five countries with the highest income inequalities on the world. More particularly, the gap between the urban and rural poverty levels continues to widen - 54.4% of the population remains below the poverty line and 40.8% are in extreme poverty, this is particularly the case in rural areas where about 58% of the population live.

In the energy sector, Zambia shows some similarities with the least developed countries of Sub-Saharan Africa. More particularly, Zambia has a low energy consumption per capita (700 kWh/capita in 2014); a prevalent use of biomass energy for domestic use (wood fuels), of the order of 70% of total national energy consumption, putting a strong pressure on forestry resources; very low electrification rate (only about 31.2% of the population is connected to the grid); a very low resource diversification for modern energy services with almost total dependency on large hydropower power plants (nearly 84% of its installed power generation capacity in 2016) as well as imports of oil products; high technical and commercial losses (a total of 18% of the production in 2015); worrying financial situation of the vertically integrated state utility, ZESCO, linked to a non-cost reflective electricity tariff structure.

The drought that the Southern Africa region is experiencing and the overreliance on large hydropower power plants led to **severe load shedding** countrywide, slowing down commercial activities and increasing the cost of production due to costly diesel backup generators.

The country has a rich and diversified endowment in renewable energy (RE) resources, however only a limited percentage is being used for electricity generation. Development lagged behind primarily because of the non-cost reflective electricity tariff structure, lack of conducive legal, regulatory and commercial environment for RE solutions and limited awareness and experience with RE technologies. The existing regulatory framework is relatively well developed but lacks effective instruments to promote energy access targets such as those endorsed under the SE4All (Sustainable Energy For All) Initiative.

The most prominent divide in access to electricity in Zambia is of geographical nature, as only 4.4% of Zambians in rural areas have access to electricity, compared to 67% in urban areas (2015). Such a disparity strongly corresponds with the differences in income levels within the population, as poverty is even more prevalent in rural areas. A determining factor for the future power sector development is the large size of the country (743,400 km²) and the very low population density in rural areas (18.7 per km²) yielding a very high connection cost per capita. Establishing decentralized energy supply is a solution the Government of Zambia is trying to implement as an alternative to the high and unsustainable cost of extending distribution networks. In the long run, the Rural Electrification Authority (REA) assumes that at least 30% of rural households should be electrified through the off-grid solar home systems or mini-hydro power plants. Because of the strained public resources investment will need to come to a large extent from the private sector, particularly in areas where the productive use of electricity can be prioritized.

Another prominent divide with regard to energy is between men and women, as captured in the Country Gender Analysis carried out by the EU Delegation in 2016. Evidence suggests that electrification of households in rural areas has clear potential to increase women's employment [*E. Duflo, (2012): J. Economic Literature, Vol. 50, No. 4, pp.1051-79*], to be a driver for more effective clean energy initiatives, greater return on investments, and expand

the prospects of reducing emissions [USAID, 2014: [Women at the Forefront of the Clean Energy Future](#)].

1.1.1 Public Policy Assessment and EU Policy Framework

Access to sustainable energy services and rational use of energy is an important component of the international development aid agenda as confirmed by the adoption of the 17 Sustainable Development Goals (among which SDG 7: "Ensure access to affordable, reliable, sustainable and modern energy for all") and the Climate Change Agreement reached at the COP21 in Paris.

The European Commission's Communication "*Increasing the impact of EU Development Policy: an Agenda for Change*" (COM (2011)637 final), recognises the catalytic role of energy "*as a key driver for inclusive and sustainable growth*". The pivotal role of the private sector, the main actor targeted in this Action, is depicted in the European Commission's Communication "*A stronger role of the Private Sector in Achieving Inclusive and Sustainable Growth in developing countries*" (COM (2014)263 final). Such a pivotal role is reconfirmed by the recent European External Investment Plan (2016). Finally, the **11th National Indicative Programme for Zambia** (NIP) offers EU support to "improved access to clean, reliable and affordable energy for all" and the EU Gender Action Plan aims at addressing the equal access to clean energy infrastructure and equitable engagement in its management.

With regard to Zambia's national development plans and strategies, the **7th National Development Plan** (2017) fully recognises enhanced generation from renewable energy sources and increased access to energy as key development goals. This is in line with the **National Energy Policy** (NEP, revised in 2008), which promotes renewable energy and energy efficiency and **Vision 2030**, which aspires at increasing national electrification levels from 25% to 66%, with 90% in the urban areas and 50% in the rural areas. Furthermore, rural electrification was identified in the 2014 **National Gender Policy Plan** (NGPP) as needed to prevent women and children from being exposed to health hazards due to predominant use of wood fuel, and to security risks when collecting wood far from their settlements, as well as to provide opportunities to develop small businesses and for creating better educational conditions for children.

The Government is committed to introducing a sustainable tariff system. At SADC level, Zambia agreed to adopt a fully cost-reflective tariffs system by 31 December 2019 and in May 2017 the Energy Regulation Board (ERB) has already approved an increase of retail customers' tariffs by 75%. Studies are ongoing to establish the overall cost of electricity service per kWh considering the current and future plants and further tariffs increase is expected in 2018.

To expedite implementation of renewable energy production, the Government has developed a draft Renewable Energy Feed in Tariff (REFIT) Strategy, which is expected to be approved by the Cabinet in the coming months. This strategy is to provide a framework and overall guidance for grid scale renewable energy development in Zambia in partnership with private sector but further secondary legislation and implementing regulations will have to follow.

The Government has put in place a Ministry of Gender as well as policies on gender equality but these inequalities are still not sufficiently tackled.

1.1.2 Stakeholder analysis

Three main groups of stakeholders can be identified within this Action:

- The final beneficiaries getting access to energy services, principally in poor and isolated areas, with scarce possibilities of getting connected to the main grid;

- Private stakeholders, including businesses, financial intermediaries, and associations active in the development field, which – given the private sector's potential for generating an inclusive and sustainable growth – will play an important role both as a source of finance and as partners for grid operators, local governments, non-governmental organisations (NGOs) and donors;
- All Finance Institutions eligible under the EU blending framework, either directly or indirectly through their central, regional and local administrations.

1.1.3 Priority areas for support/problem analysis

In Zambia, some 69% of the population (or over 11 million people) have no access to electricity and the majority of the nearly 700,000 people living in rural areas who are connected to the grid experience unreliable electricity services. Moreover, most of Zambia's citizens still rely on solid fuels, such as traditional biomass, wood and coal for cooking and heating, which represent more than 70% of national energy consumption. Given the rate of demographic growth and the unsustainability of large scale grid extension, a significant increase in access to affordable, reliable, sustainable and modern energy services for the Zambian population will remain a challenge for the years to come unless cost-efficient and innovative ways of bringing the energy to the people, especially in remote areas, can be unlocked. Access to sustainable and affordable energy is central to inclusive and equitable economic growth of the country and provides opportunities for the poor to escape the worst impacts of poverty (due to better living conditions and job opportunities), as well as mitigates/reduces the undesirable effects of unsustainable use of resources on the society and economy as a whole (reduced greenhouse gases (GHG) emissions, health hazards, pressure on land degradation etc.).

As concluded by the scoping mission undertaken by RECP (EU-Africa Renewable Energy Cooperation Programme) in June 2016, Zambia is a country with high physical and market potential for renewable energy solutions, especially solar-PV and hydropower. The current energy crisis in Zambia, caused by a high dependency on large hydropower plants, the drought that the Southern Africa region is experiencing, overdue maintenance of existing hydropower facilities, as well as a growing energy demand, creates a large interest in private investment in energy. So far, low and non-cost reflective tariffs have been a considerable barrier for investing in new generation capacity, for both the public utility ZESCO and private sector, but the gradual move towards a cost-reflective tariff system in the near future seems inevitable as this is broadly recognized as a matter of priority by both political leaders and sector stakeholders. The ongoing Cost of Service study (supported by the African Development Bank (AfDB)) will advise the Government on the appropriate tariff structure and propose a mechanism for its adjustments. In addition, the ongoing negotiations with the International Monetary Fund (IMF) on the economic recovery programme for Zambia should also bring additional momentum for necessary sector reforms and/or adjustments aimed to increase the public sector efficiency.

Moreover, as identified during formulation of the 11th EDF project "*Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy production*", among other root causes of low access to clean energy in Zambia and key barriers to effective private sector involvement are: unclear policies regulating renewable energy and energy efficiency (RE & EE) development, lengthy and complex procedures for reaching the power purchase agreement stage, lack of access to affordable capital (especially at early project development stages), as well as general lack of capacity and know-how to promote modern and clean energy services. Most of these problem areas will be addressed by the above mentioned EU funded project, including support to a limited number of demonstration projects to be developed under the enhanced regulatory framework.

However, in order to make the best use of limited development funding compared to the scale of investment that is needed and leverage substantial private investment in sustainable energy services, it is important to mobilize appropriate and flexible financing schemes tailored to the needs of private investors and granting them access to seed, mid- and long-term capital matching their business cycles, which cannot be obtained from commercial banks which do not have such specialized financial tools at their disposal (and are not used to support investments in energy - which is certainly the case in Zambia). The lack of access to investment capital is further aggravated by the existing capacity limitations of potential investors in terms of project structuring and bringing projects to a financial close.

The aim of this Action is thus to bridge the gaps in structuring and financing of investments addressing the lack of access to clean, reliable and affordable electricity and energy services by contributing a portion of the 11th EDF National Indicative Programme funding for Zambia to "ElectriFI", the EU electrification financial initiative, implemented via the African Investment Facility and specifically designed and dedicated to accelerate rural electrification worldwide by promoting decentralized renewable energy solutions in partnership with private sector and other development partners.

Within the first two global ElectriFI call for proposals, launched in March 2016 and in February 2017, the response from Zambia project promoters was very encouraging:

- In the first call, Zambia was the 2nd applicant country in terms of number of projects presented for support and 3rd in terms of support amount requested.
- In the second call, Zambia ranked among the 5 top applicant countries in terms of number of projects presented for support in Africa (no statistics yet available on support amount requested).

This hints that the demand for highly professional financial assistance that ElectriFI can provide is significant. Based on this positive response, the National Authorising Officer (NAO) has officially requested the EU to consider channelling EUR 40 000 000 of the NIP of the 11th EDF through ElectriFI to boost private investment in RE sector in Zambia.

It is therefore proposed to create a Zambia dedicated window under ElectriFI ring-fencing the contribution amount in full for projects to be selected via competitive call for proposals (CfP) to be implemented in Zambia. The scope and target groups of this future CfP should be coordinated with the Government and EU Delegation so as to facilitate synergies with the call for demonstration projects to be launched under the above mentioned 11th EDF project. In general, the ElectriFi – Zambia window will support investments in renewable energy and energy efficiency, with a special focus on mini-grids and rural electrification, that demonstrate strong features for sustainability, scalability and/or replicability, will be open to public or private institutions and support various viable business models. An ongoing scoping missions financed under the EU Technical Assistance Facility (TAF) for the SE4ALL initiative will provide further advice on shaping the foreseen CfP and setting the specific criteria for the ElectriFI country window.

1.2 Other areas of assessment

Not Applicable.

2 RISKS AND ASSUMPTIONS

Risks	Risk level	Mitigating measures
Lack of attractiveness for private investors	Medium	Support to Government under the project FED/2016/037-933 to create enabling environment for RE & EE and to adhere to SADC commitment of implementing cost-reflective tariffs by 31/12/2019. Reinforced policy dialogue under the joint Declaration of Intent on Energy.
Low response from the private sector	Low	Calls for proposals to be advertised through professional and civil society networks (global Electrifi calls show that clear desire for developing RE projects already exists).
Negative environmental and social impact	Low	<ol style="list-style-type: none"> 1. Priority will be given to projects located in areas with high precipitation levels for hydropower projects and with high solar irradiation levels for photo-voltaic installations. 2. Due diligence built in the evaluation process, including respect to safe disposal and recycling of polluting elements associated with the development of renewable energies and energy efficiency. 3. Gender and social inclusion to be mainstreamed into selection criteria of the call for proposals and into project implementation and reporting modalities.
Projects supported not implemented or sustainable	Low	<ul style="list-style-type: none"> • Due diligence built in selection criteria of the call for proposals. • Project proposals based on robust and sound business models. • Technology to be proposed must be proven. • Consultation, awareness raising and training of local businesses and communities to ensure the transfer of know-how and ownership.
EU support may lead to market distortion	Low	<ul style="list-style-type: none"> • Due diligence. • Associated technical assistance and capacity building to stimulate enhancement of the market and competition.
Assumptions		
<ul style="list-style-type: none"> • Political stability of the country and continuous GDP growth of Zambia; • Political support to introduce a cost-reflective tariff and other instruments to promote private investment in the energy sector. A step wise increase of the electricity tariffs is one of the top political priorities in Zambia and the Energy Regulation Board has already recently approved an <i>interim</i> increase of retail customers' tariffs by 75% in 2017; • Limited depreciation of the kwacha as it would further increase the gap between current retail tariffs and cost-reflective tariffs; • Continuous dialogue with Government and Cooperating Partners - through the EU Delegation - on their initiatives to maximize synergies and potential impact. 		

3 LESSONS LEARNT, COMPLEMENTARITY AND CROSS-CUTTING ISSUES

3.1 Lessons learnt

Recent lessons learnt from energy projects carried out in Zambia and the region, including from the mid-term review of the 10th EDF funded ACP-EU Energy Facility, can be summarized as follows:

- Local and decentralized solutions as a way of resource diversification and of increased access to energy services for the poor have proved to be highly efficient and are critical to off-set the prohibitive cost of main grid extension in low population density areas;
- The productive use of energy is confirmed to be the most promising model of accelerated and inclusive growth, and successful business models with replicability/scalability potential should be sought as they have valuable spillover effects on economic growth and help in sustainable development of local economies;
- Calls for Proposals was the main path for implementing the access to energy projects in the past and calls targeting rural electrification and rural access to modern energy services proved to be successful. However, the finance leveraging levels were below expectations and a more results-driven approach should be further promoted;
- The leverage of sizeable development finance dedicated to infrastructure investments and to facilitate access to finance of micro-, small- and medium-sized enterprises in the energy sector is of key importance in meeting the policy objectives in terms of access;
- The use of innovative financial instruments to boost lending to Small Medium Enterprises (SMEs) by commercial banks, as well as risk capital to invest in funds that lend or invest in SMEs is instrumental for mobilizing investments;
- Cooperation with established operational networks, such as civil society networks, can be the catalyst in overcoming difficulties relating to effective engagement with local communities (e.g. for fee collection and grid maintenance activities);
- Fiscal incentives for energy efficient equipment and import restrictions on those that do not conform to standards should be enforced.

3.2 Complementarity, synergy and donor coordination

In response to the current acute energy crisis, 11 Cooperating Partners (CPs) decided to step up their support to the sector and coordinate and reinforce the dialogue with the Government of Zambia. To this end, a joint Declaration of Intent was signed at the COP 22 in Marrakesh.

This Action will complement the parallel 11th EDF project "*Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy production*", which addresses the deficiencies of the institutional and regulatory framework and the capacity building needs of the sector and will include support through grant funding of demonstration RE and EE projects. The far-reaching capacity building programme extends to the private sector and may, if so requested, cover any specific needs for private banks, funds, Monetary Financial Institutions (MFIs), intermediaries and associations to manage technical and financial risks related to ElectriFI financing and grant funding. Another EU funded programme is underway to reinforce the monitoring and evaluation (M&E) system for government policies and the above project shall provide on-demand support specific to the energy sector.

The ongoing EU TAF's mission will help define criteria to make sure that calls for proposals from the two projects attract different types of proposals. More particularly, fully commercially viable projects shall be excluded from ElectriFI financing and grant funding; projects that are commercially viable if the financier has a higher appetite for risk than commercial banks (and development banks) shall be eligible for ElectriFI financing but shall be excluded from grant funding; only projects that even with ElectriFI finance would not be economically viable shall be eligible for grant funding.

Moreover, the Action will complement or reinforce similar support programmes of other CPs aimed at scaling up both the on-grid and off-grid RE power supply in the country. The most relevant in terms of possible synergies are being developed by IFC (Scaling Solar – focussing on multiple sites of 50 MW each), KfW (GETFiT – in support of REFiT policy and focussing on the below 20 MW level and above 5 MW) and Sweden (Beyond the grid - targeting off grid rural electrification, mostly stand-alone systems). The successful response to both Beyond the Grid and Scaling Solar programmes' first calls has proved this approach to be appropriate and timely.

In terms of financial arrangements, synergies may be sought with the European Development Finance Institutions (EU EDFI) Private Sector Development Facility, which is aiming at catalysing private investment into small and medium scale energy projects in Africa. It comprises a Guarantee Facility whereby the EU shares risk with EDFIs to enable them to finance riskier energy projects than their current investment strategy and risk management constraints allow. Other synergies may occur with the EU Member States' complementary programmes or initiatives, including the European Union Energy Initiative - Partnership Dialogue Facility (EUEI PDF) and the Africa-EU Renewable Energy Cooperation Programme (RECP).

Finally, under this Action, EU Member States and global financial partners will be welcome to complement the overall EU funding dedicated to Zambia with possible additional contributions in line with the Paris Declaration principles, aiming at more coherence and better coordination between donors and financial institutions' operations.

3.3 Cross-cutting issues

Cross-cutting issues, in particular gender and environment will be fully taken into account during the design, preparation and implementation of projects to be supported.

Environmental sustainability: support for energy efficiency measures and development of renewable energies will contribute to climate change mitigation (through reduced emissions of greenhouse gases compared with fossil fuel-based options). Adequate information on the impact of the proposed projects on the environment will be a prerequisite for the proposals evaluation. Environment friendly technologies will be favoured.

Gender equality: women and girls will be the primary beneficiaries from access to improved energy services because of their traditional responsibilities for firewood collection. They are also the ones who suffer most from serious health consequences due to indoor cooking hazards. Moreover, time and physical effort women and girls spend on those traditional duties, limits their ability to engage in educational and income-generating activities. Projects to be supported will have to demonstrate adequate measures addressing those issues. Further advice on how to mainstream gender equality into projects to be supported under this action, including capacity building activities, will be undertaken within another 11th EDF project (*Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy production*).

Social impacts: In addition, electrical lighting will produce better opportunities for students and teachers in targeted areas, and will create better working conditions to attract and retain qualified staff. Positive impacts on access to healthcare and possibility to develop productive uses are also to be expected. Activities that aim at the economic empowerment of women of all ages, youth and at the support of vulnerable groups will be particularly encouraged and projects that are associated with productive activities to ensure their financial sustainability will be favoured during evaluation.

4 DESCRIPTION OF THE ACTION

4.1 Objectives/results

This programme is relevant for the United Nations 2030 Agenda for Sustainable Development. It contributes primarily to the progressive achievement of SDG target 7 "Ensure access to affordable, reliable, sustainable and modern energy for all", but also promotes progress towards Goal 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" and 13 "Take urgent action to combat climate change and its impacts". This does not imply a commitment by the country benefiting from this programme. The action also will drive achievement against the EU's Gender Action Plan: Objective 16 (Equal access and control over clean water, energy, transport infrastructure, and equitable engagement in their management, enjoyed by girls and women), in particular indicator 16.6: % population using reliable electricity by urban/rural (SDG 7.51) (disaggregated by sex).

The overall objective of this project is to contribute to economic development and climate change resilience of the country by increasing access to clean, reliable and affordable energy and renewable energy production in Zambia.

The associated purpose (specific objective: SO) is to encourage more investments to promote increased contribution of Renewable Energy Sources in the energy mix along with energy efficiency measures and enhance access to more efficient and sustainable climate change friendly energy services that are gender inclusive and accessible to all. This will be achieved by attracting additional financing from the private sector, including the local banking sector, in the field of decentralised energy solutions to benefit poor population living principally in rural areas.

The output contributing to the above purpose is a pipeline of bankable and sustainable infrastructure projects in the fields of renewable energy and energy efficiency, mainly addressing the needs for access of households and social facilities (schools, clinics) in the poor and remote communities of Zambia, which is adequately prepared and/or implemented.

4.2 Main activities

Operations to be potentially financed under this Action would include any renewable energy and energy efficiency solution for meeting the above described objectives. The types of funding that are going to be made available and the pipeline of projects shall be defined at a later stage. The identification of potential pipeline of projects, which is currently underway through a scoping mission from the EU TAF (see Section 3.2 above), was instrumental to define the financing absorption capacity for ElectriFI type of financing.

ElectriFI shall provide financial support primarily through risk capital. More particularly, either development finance, debt, quasi-equity, equity and guarantees are expected to be supplied. The Lead Financial Institution shall exercise flexibility in structuring ElectriFI's financing instruments and repayments, in order to match expected cash flows of projects. No grant funding, concessional loans or other low-cost capital shall be provided. Where innovative business models are proposed, replicability and scalability will be important considerations. Increasing levels of risk financing are expected to be commensurate to increasing returns. The maximum amount of any financing solution will be EUR 10 million (or local currency equivalent).

In all activities to be supported, an emphasis on the promotion of productive uses of energy, job creation, economic empowerment of women of all ages, youth and support to vulnerable groups will be sought and encouraged.

The Lead Financial Institution may create synergies with the implementing partners of the project "*Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy production*", through the EU Delegation, to provide capacity building activities for private banks, funds, MFIs, intermediaries and associations to reduce the risks and have more stable and profitable RE/EE projects/businesses.

Innovative activities, especially those allowing for significant leverage of private and commercial funding and/or employment opportunities, will be encouraged. Activities built on strong partnerships between the private sector and local actors and/or Civil Society Organisations (CSOs) will also be prioritized, while complementarity with Research and Innovation actions in the field of energy as funded under the Horizon 2020 programme will be sought, where feasible, so that this could generate additional benefits to the targeted population and contribute to the technology advancement in Zambia.

Information and communication activities designed to raise the awareness of specific or more general audiences on their potential benefits from the EU support, as well as of the results and the impact of this support, will be undertaken.

4.3 Intervention logic

The intervention under this project will complement the 11th EDF project "*Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy production*" (ZM/FED/037-933) in addressing the causes for the current low and unequal access to clean, reliable and affordable energy. While the latter project will primarily focus on creating an enabling policy, regulatory and institutional environment for renewable energy and energy efficiency deployment and building capacity of various stakeholders for RE & EE application, this Action will target the financial and technology constraints hampering the development of the clean and efficient energy market. Thus, these two actions running in parallel will produce synergies that should then lead to an increased and more equitable access to electricity across Zambia.

More particularly, the above mentioned project shall reinforce the capacity of institutions that play a role in facilitating market entry as well as help streamline procedures for investors and help establishment a real "one-stop shop" to fast-track investment and increase efficiency by reducing uncertainty and project development costs. In fact, the regulatory framework is largely in place to allow for private investment in generation and distribution and the Government confirms that direct agreements/contracts between private sector electricity producers and private sector users (companies or individuals) are possible already now with the existing legislative framework. However, private investors wishing to enter the market still face a number of hurdles and risks, lengthy procedures and need to deal with multiple agencies for licensing. To further promote private sector participation in the sector and diversify the energy mix, regulations pertaining to *Grid Code*, *Open Access*, and *Licensing* are already undergoing reviews. For the support of private, small scale renewable energy projects, a REFiT Strategy has been developed and awaits Cabinet approval.

As regards financial and technology constraints hampering the development of the clean and efficient energy market, investments in the field of energy access, not only in Zambia, currently confront, inter alia, technology, market and currency risks. Commercial banks are therefore reluctant to provide suitable lending conditions that would respond to the needs of investors. In addition, many stakeholders willing to invest have significant capacity limitations in terms of structuring and bringing projects to a financial close.

The action aims to bridge the gaps in structuring and financing of investments addressing the lack of access to clean, reliable and affordable electricity and energy services in Zambia by building on the competitive procurement processes and best practices from all over the world

on which the ElectriFi initiative has been modelled. ElectriFi is a dedicated financing initiative, elaborated by the EU jointly with the industry and financiers, in order to bridge the gap in structuring and financing of projects and leverage the private sector investments increasing and improving access to affordable, reliable, sustainable and modern energy in developing countries.

Its main features are outlined below:

- ElectriFi makes support available throughout the entire project cycle, from the project idea to its successful implementation and scaling up. It is a comprehensive and inclusive platform for investment support services, rendering due attention to bankability at very early stages, whilst facilitating access to senior debt at later stages.
- Operations are assessed against a set of criteria including: aid effectiveness and coherence with country ownership principles, development impact (new or improved access to electricity and energy services, jobs creation, etc.), additionality (meaning the need of the support requested), neutrality (meaning avoidance of market distortion), replicability and scaling-up potential and compliance with environmental, social and fiscal standards.
- To best address the variety of funding needs of the market, support in alternative forms, such as guarantees, local banks credit lines, currency risk mitigation, etc. can be also considered.

The selection of the financial institution that will implement the project will be done following the African Investment Facility (AfIF) procedures. AfIF is the blending platform to which the financial institution will submit its proposal for the implementation of the ElectriFi – Zambia window project. The EU Delegation and the Government of Zambia will take part in the selection process of final beneficiaries. The final shape of the Zambia specific ElectriFi programme is open to discussion between the parties.

In order to support the rationale this Action is based on, it is expected that the following **commitments** should be fulfilled during the period of implementation of this action:

- Adoption by the Government of the Renewable Feed-In Tariff (REFIT) strategy; the Strategy is already at the Cabinet and its approval is expected soon;
- Adoption by the Government of a migration path towards the effective introduction of the cost-reflective tariffs by 2019 in line with SADC commitments. Migration process will be informed by the results of a comprehensive cost of service study that is expected to be completed by end 2017; meanwhile, in May 2017, ERB has already approved a 75% *interim* increase of retail customers' tariffs.

5 IMPLEMENTATION

5.1 Financing agreement

In order to implement this action, it is foreseen to conclude a financing agreement with the partner country, referred to in Article 17 of Annex IV to the ACP-EU Partnership Agreement.

5.2 Indicative implementation period

The indicative operational implementation period of this action, during which the activities described in section 4.2 will be carried out and the corresponding contracts and agreements implemented, is 84 months from the date of entry into force of the financing agreement.

Extensions of the implementation period may be agreed by the Commission's authorising officer responsible by amending this decision and the relevant contracts and agreements; such amendments to this decision constitute non-substantial amendment in the sense of Article 9(4) of Regulation (EU) 2015/322.

5.3 Implementation of the budget support component

Not Applicable.

5.4 Implementation modalities

5.4.1 Contribution to the African Investment Facility (AfIF)

This contribution may be implemented under indirect management with the entities, called Lead Financial Institutions, to be indicated in complementary financing decisions at the end of the EU African Investment Facility award procedure in accordance with Article 58(1)(c) of Regulation (EU, Euratom) No 966/2012 applicable in accordance with Article 17 of Regulation (EU) 2015/323.

The entrusted budget-implementation tasks consist of the implementation of procurement, grants, financial instruments and payments. The entrusted Member State agency or international organisation shall also monitor and evaluate the project and report on it.

The Lead Financial Institutions are not definitively known at the moment of adoption of this Action Document. A complementary financing decision will be adopted under Article 84(3) of Regulation (EU, Euratom) No 966/2012 to determine the Lead Financial Institutions definitively.

5.5 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply.

The Commission's authorising officer responsible may extend the geographical eligibility in accordance with Article 22(1)(b) of Annex IV to the ACP-EU Partnership Agreement on the basis of urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

5.6 Indicative budget

	EU contribution (EUR)	Indicative third party contribution (EUR)
5.4.1 Contribution to the African Investment Facility	40 000 000	To be decided at a later stage
5.9 Evaluation, 5.10 Audit	To be covered by another measure constituting a financing decision	N.A.
5.11 Communication and visibility	N.A.	N.A.
Contingencies	N.A.	N.A.
Totals	40 000 000	To be decided at a later stage

5.7 Organisational set-up and responsibilities

The contribution to the African Investment Facility will be implemented under the governance of the EDF blending framework. Once the contribution amount is made available for operations under ElectriFI, the ad-hoc governing structure, rules and procedures applicable will be set up. However, in any case, the Government of Zambia will participate in the decision making process in relevant bodies with a non-objection right with regard to scope of Zambia specific call for proposal, criteria for assessing proposals and projects proposed for financing.

The lead financial institution will ensure systematic consultation with the Government of Zambia, the EU Delegation to Zambia and the Commission services concerned at an early stage of call for proposals preparation as well as regular reporting during implementation.

5.8 Performance monitoring and reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process and part of the implementing partner's responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the relevant minimum set of indicators defined in the EU blending results framework. The report shall be laid out in such a way as to allow monitoring of the means envisaged and employed and of the budget details for the action. The final report, narrative and financial, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

5.9 Evaluation

Having regard to the importance of the action, and in addition to evaluation tasks to be carried out under the responsibility of the Lead Financial Institution, mid-term, final and or ex-post evaluations will be carried out for this action or its components via independent consultants contracted by the Commission.

A mid-term evaluation might be carried out for problem solving, learning purposes, in particular with respect to efficiency of the regulatory framework in place and the quality of projects selected via the call for proposals, and to assess how the action facilitated improvements in gender equality and pro-poor inclusion in the sector and areas targeted by projects supported.

The final and or ex-post evaluation might be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular the fact that ElectriFI is an innovative Electrification Financing Initiative to attract private investment to address energy poverty in Africa and more particularly in Zambia.

The Commission shall inform the implementing partner at least one month in advance of the dates foreseen for the evaluation missions. The implementing partner shall collaborate efficiently and effectively with the evaluation experts, and inter alia provide them with all necessary information and documentation, as well as access to the project premises and activities.

The evaluation reports shall be shared with the Government of Zambia and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the Government of Zambia, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

The financing of the evaluation shall be covered by another measure constituting a financing decision.

5.10 Audit

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

The financing of the audit shall be covered by another measure constituting a financing decision.

5.11 Communication and visibility

Communication and visibility of the EU is a legal obligation for all external actions funded by the EU.

This action shall contain communication and visibility measures which shall be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation and supported with the budget indicated in section 5.6 above.

In terms of legal obligations on communication and visibility, the measures shall be implemented by the Commission, the partner country, contractors, grant beneficiaries and/or entrusted entities. Appropriate contractual obligations shall be included in, respectively, the financing agreement, procurement and grant contracts, and delegation agreements.

The Communication and Visibility Manual for European Union External Action shall be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.

Communication and visibility measures will be implemented by the Lead Financial Institutions responsible for implementing the respective projects. These measures will be described in the project proposal submitted by the Lead Financier to the African Investment Facility. Care will be taken that substantial visibility is given to all activities described in this Action Document.

APPENDIX 1 - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY)¹

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action, no amendment being required to the financing decision. When it is not possible to determine the outputs of an action at formulation stage, intermediary outcomes should be presented and the outputs defined during inception of the overall programme and its components. The indicative logframe matrix will evolve during the lifetime of the action: new lines will be added for including the activities as well as new columns for intermediary targets (milestones) for the output and outcome indicators whenever it is relevant for monitoring and reporting purposes. Note also that indicators should be disaggregated by sex whenever relevant.

	Results chain	Indicators	Baselines (incl. reference year)	Targets (incl. reference year)	Sources and means of verification	Assumptions
OVERALL OBJECTIVE: Impact	Increased access to clean, reliable and affordable energy and renewable energy production in Zambia.	a. Percentage of the population with access to electricity (SDG 7.1) (** EU RF L1 #11) b. *Electricity Generation Capacity from Renewable Energy (in MW) c. RE share in the country energy mix (SDG 7.2) (** EU RF L1 #12)	a. 1. Rural Areas: 4.4% in 2015 2. Urban Areas: 67% in 2015 b. 2,388 (2016) c. 84.5 % (2016)	a. 1. Rural Areas: 50% in 2030 2. Urban Areas: 90% in 2030 b. > 4,000 (2025) c. To be defined by GRZ (2025)	ERB Sector Reports, ZESCO reports, ad-hoc reports by parallel EU funded project and other projects on public policies' reviews, implementers/grantee's /creditors' reports, reports by financial institutions and intermediaries	
Specific objective: OUTCOME	Encourage more investments to promote increased contribution of Renewable Energy Sources in the energy mix along with energy efficiency measures and enhance access to more efficient and sustainable climate change friendly energy services that are gender inclusive and accessible to all, by attracting additional private sector financing in the field of decentralised energy solutions to benefit poor population in rural areas	a. Value of private or public/private sector investments in RE in rural areas, in million euros b. Leverage factor (EU funding/ private and concessional financing) c. Additional installed capacity from RE sources due to EU support in this project (MW) (** EU RF L2 #12) d. The volume of GHG emissions reduced due to EU support in this project (tons CO2/year) (** EU RF L2 #23)	a. 3 (2016) b. 0 (2016) c. none (2016) d. none (2016)	a. > 200; tbc in the inception period (2025) b. 1:6; tbc in the inception period (2020) c. 30; tbc in the inception period (2022) d. 12,000 (2025)	Call for proposal results Evaluation report, implementers/grantee's /creditors' reports, reports by financial institutions and intermediaries	Timely enforcement of public policies to create a better investment environment for RE/EE. Revised and realistic targets for RE and EE in place. Capacity building support by Project ZM/FED/037-933. Adequate engagement of local communities and CSOs. Awareness campaigns.

¹ Mark indicators aligned with the relevant programming document mark with '*' and indicators aligned to the EU Results Framework with '**'.

	Results chain	Indicators	Baselines (incl. reference year)	Targets (incl. reference year)	Sources and means of verification	Assumptions
OUTPUTS	Output 1. Pipeline of sustainable projects in the fields of renewable energy and energy efficiency, mainly addressing the needs for access of households and social facilities (schools, clinics) in the poor and remote communities of Zambia, adequately prepared and/or implemented	<ul style="list-style-type: none"> a. Number of investments in RE /EE supported by the Action b. Number of projects reaching financial closure due to EU support c. Annual output from RE sources thanks to EU support (GWh) d. Demand-side savings (in MW) due to EE measures implemented e. Share of population using solid fuels for cooking in rural areas (%) disaggregated by gender and disability f. Number of customers per investment supported by the Action disaggregated by households/social amenities and businesses g. Number of households with new or improved access to energy as a result of projects supported by the Action – disaggregated by locality. h. % of women led households (in projects coverage area) getting access to electricity i. Number of jobs created as a result of projects supported disaggregated by sex: <ul style="list-style-type: none"> 1. construction phase (direct employment) (** EU RF L2 #28 – in part of ALMPs) 2. operation phase and indirect employment 	<ul style="list-style-type: none"> a. none (all 2016) b. none (2016) c. none (2016) d. none (2016) e. 95 (2013) f. none (2016) g. none (2016) h. none (2016) i. none (2016) 	<ul style="list-style-type: none"> a. 10 - to be defined before the launch of call for proposals (2025) b. >3 - to be defined before the launch of call for proposals (2025) c to i. To be defined before the launch of call for proposals (2025) 	Call for proposal results, Project monitoring reports, Ex-post evaluation.	<ul style="list-style-type: none"> - TA provided to investors for pipeline boosting and project structuring. - TA provided to investors and final beneficiaries - Adequate engagement of local communities and CSOs. Awareness campaigns.

APPENDIX 2 - INDICATIVE LIST OF PROJECTS/PLAN FOR FUNDING

Sub-region	Country	Lead Finance Institution	Operation's Title	Sector	Estimated total investment cost (EUR million)	AfIF estimated Request (EUR million)
Southern Africa	Zambia	The Netherlands Development Finance Company (FMO, Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V)	ElectriFI – Zambia window	Energy	280	40