

European Fund for Sustainable Development (EFSD) Guarantee

Title: Investment Window - Sustainable Energy and Connectivity

1. Policy Rationale

Background analysis: Potential Investment Windows in this area will contribute to achieving the United Nation's Sustainable Development Goal (SDG) #7 on “Access to affordable, reliable, sustainable and modern energy”; SDG #9 on “Building sustainable and resilient infrastructure development”; and SDG #13 to “Take urgent action to combat climate change and its impacts”. This window will target sectors such as renewable energy, energy efficiency and transport, enhancing energy security and sustainable development while addressing climate risks and helping countries deliver on their commitments to implement the Paris Agreement. It will also contribute to reducing energy poverty.

Access to renewable and sustainable energy is fundamental in reducing poverty and foster the transformation to competitive low-carbon and climate-resilient inclusive green economies. This has been confirmed at global level by the 2030 Agenda and the Paris Agreement, at EU policy level by the new European Consensus on Development and the support to initiatives like the Sustainable Energy for All (SE4All) and the Africa Renewable Energy Initiative (AREI) and at practical level by the increasing interest and investments of the private sector in climate-friendly energy projects. Climate change and lack of sustainable and reliable energy access exacerbate poverty, weaken development efforts and are among the root causes of migration. Despite rapidly rising cost-competitiveness of renewable energy technologies, the financing of renewable energy projects is still difficult in many parts of the world. More is needed to meet energy and climate change goals. Limiting the global mean temperature rise to below 2°C would require around \$3.5 trillion in energy-sector investments each year until 2050¹: fossil-fuel investment would be offset by 150% increase in renewable energy supply investment, but also in energy efficiency and transmission and distribution grids. The transformation of the energy sector requires ambitious policy measures, as well as unlocking private capital, in particular from institutional investors, through risks mitigation².

The lack of creditworthy offtakers is one of the key factors deterring investment in this sector, as identified in several sector studies³. The weak balance sheets and poor payment track records of many national utilities is one of the reasons why many commercial banks have been unwilling to fund projects, reducing competition and increasing the cost of capital. In addition, policy and regulatory barriers and risks, market barriers, macro-economic conditions, poor governance, grid/infrastructure constraints and investment risks, including a lack of reliable investment data, are, among other

¹ Perspectives for the energy transition – investment needs for a low-carbon energy system ©OECD/IEA 2017.

² Perspectives for the energy transition – investment needs for a low-carbon energy system ©OECD/IEA and IRENA 2017.

³ See for example: IRENA (2016), ‘Unlocking Renewable Energy Investment: The Role of Risk Mitigation and Structured Finance,’ IRENA, Abu Dhabi

reasons, currently obstructing the development and financing of both renewable energy and energy efficiency and the investment for increasing energy access. Combined effort of governments, public institutions, the financial/banking sector and the private investors are therefore necessary to meeting the growing energy demands while addressing climate change risks.

As regards transport, the key priorities are to make transport links between the EU and its Neighbours and Africa, as well as intra-regional connections, more sustainable, safer and more efficient; to support the improvement of logistics systems; to remove infrastructure and non-infrastructure bottlenecks; to promote trade facilitation; while promoting climate friendly transport modalities.

EU Policy objectives: In line with the revised European Neighbourhood Policy⁴, the New European Consensus on Development⁵ and the Council Conclusions on Energy and Development⁶, support under this window would be required to stimulate the private sector investment by reducing risks, to mobilise commercial funding in order to have a catalytic impact on low-emissions and climate-resilient inclusive economies as well as green job creation. Investments should respond to the specific situation and needs of a given country or region, they should respect social, fiscal, ethical and environmental principles and standards, including gender equality, and ensure sustainability and efficient maintenance of investments. This window could group several instruments (proposed under separate PIPs), targeting sectors of intervention including those indicatively listed in the next section.

Geographic area: Sub-Saharan Africa and the Neighbourhood regions. The inclusion of LDCs/fragile/landlocked and conflict affected countries within proposals will be positively viewed.

Domain: Access to affordable, reliable, sustainable and modern energy; Renewable energy generation; Energy efficiency; and Sustainable transport.

Sectors of intervention: The window will support the development of new low-carbon and climate resilient opportunities across sustainable energy and potentially transport sub-sectors such as: (i) on-grid renewable electricity projects such as solar, wind, geothermal and climate resilient hydropower generation including efficient transmission and distribution infrastructure for renewable electricity deployment; (ii) off-grid and decentralised renewable energy systems, including storage and hybrid systems, providing for social, domestic and productive uses of energy; (iii) renewable energy, including heating and cooling and combined heat and power; (iv) energy efficiency investments both in the industrial sector and in buildings, targeting residential, public and commercial buildings; (v) smart-grid technologies and demand side management actions; and (vi) investments in climate-smart transport logistics chains (terminals/platforms), including intermodal hubs (sea and dry ports,) transport

⁴ https://eeas.europa.eu/headquarters/headquarters-homepage/330/european-neighbourhood-policy-enp_en

⁵ COM(2017) New European Consensus on Development

⁶ Energy and Development — Foreign Affairs Council conclusions (28.11.2016), 14839/16.

services and equipment, investments in roads, railways, airports and ports and related to the greening of the transport sector (based on a sustainable transport model).

2. Operational Concept

The risk perception of investors can be influenced by several factors e.g. policy design, policy changes, permitting procedures, grid access etc. The EFSD guarantees shall be structured in such a way as to lower actual and perceived risks including those associated with the credibility of power off-takers e.g. cash flow constraints, create conditions for mobilising private funding, including institutional investors and crowdfunding platforms, and developing the local capital market.

Type of operations: The EFSD Guarantee may be used to cover the risks for loans, guarantees, counter-guaranties, capital market instruments, and any other form of funding or credit enhancement, insurance, and equity or quasi-equity participations. Different types of eligible operations may be included, such as:

- Guarantees instruments to mitigate various types of investment risks including: guarantees for utility demand side programmes and for vendor finance agreements with suppliers of green technologies and guarantees to support the use of energy performance contracting in order to scale up private sector participation in energy efficiency investments.
- Guarantee cover for equity/subordinated loans for renewable energy and/or related-infrastructure investments; it could cover innovative, renewable and sustainable energy and related technologies to address key risks that currently deter private sector participation, such as weather related/resources risks, exploration, ramp-up risks, uncertain grid access, connection to the grid for off-grid actions etc. Poor transmission infrastructure often increases investors' uncertainty and hampers renewable electricity development and sustainable energy access. Guarantees can be provided to cover transmission lines and grid connection related risks. Off-taker and liquidity risks are closely related with this type of transmission line/connection delay risks.
- Guarantees covering fully or partially the offtake agreements in renewable energy investments aiming to reduce the overall financing cost and the risk perception for sustainable energy related investments, including liquidity risks mitigation instruments to provide coverage against cash flow constraints or potential off-taker defaults.
- Guarantees used also to promote the launch of capital market instruments for energy efficiency/ renewable energy investments and/or investments in appropriate transmission/distributions systems and energy interconnections that will unlock significant public and private investments on a potentially transformative scale.
- Credit enhancement for investment funds attracting private institutional investors into developing country investments in renewable energy and energy efficiency.

- Any other innovative solutions addressing key project risks in sustainable energy or sustainable transport projects.

The operations listed above are indicative and non-prescriptive/exhaustive. Priority will be given to inclusive initiatives optimising leverage and cost efficiency, mobilising funding from multiple sources and countries/regions where private sector participation is currently low.

Measures for aligning the interests of the different stakeholders - including fund managers and investors - should be considered in line with relevant market practice. Such measures shall be transparent and will take into account the policy and financial objectives of the relevant instrument.

Type of risks: Risks to be mitigated may include: i) Commercial risks (e.g. payment risk, off-taker payment not honoured, off-taker bankruptcy, etc.); ii) Political and country risk (e.g. expropriation, coup d'état, civil war, etc.); iii) Legal and regulatory risk (e.g. change in law, cancellation of licenses, nationalisation, tariff adjustments, etc.); iv) Currency risks (e.g. exchange rate fluctuation, convertibility, transferability, etc.); and v) Climate change and environmental risks (e.g. droughts, extreme weather events, temperature rises, etc.).

Expected Additionality: i) Improved potential to mobilise both local and international private sector investment; ii) Catalysing and demonstrating the effect of sector reforms; iii) Demonstrating innovative environmental-friendly techniques and technologies; iv) Improved project sustainability via project structures designed to facilitate the commercial scale up and replication of financially sustainable projects; v) Innovation through the demonstration of the viability of new business models or climate-smart resource-efficient technologies, lowering market barriers and changing entrenched behaviours; vi) Improved gender-responsiveness gender equality; and vii) EU climate, social and environmental standards are promoted, including using EIAs, SEAs and CRAs and Best Available Techniques.

The EU's experience in rolling out enabling policy and regulatory frameworks for regional integration, outreach to strategic public and private partners at home and internationally promoting an enabling business environment and investments and EU private sector excellence in clean energy and sustainable transport technologies represents a pool of practice that can be exported and replicated to induce change in other markets, fostering knowledge-and technology-transfer and cooperation.

Envisaged Impact: i) Increased and improved access to affordable, reliable, sustainable and modern energy and improving quality of life; ii) Increased renewable energy generation capacity installed; iii) More efficient and rational use of energy resources, including energy efficient appliances; iv) Reduced local pollution and greenhouse gases emissions improving public health and environmental quality and helping countries to achieve their international climate change pledges; v) Low-emissions and climate-resilient inclusive growth, decent job creation particularly for youth and women and balanced territorial development, enabling of productive and social activities and other

economic benefits widespread to the society, hence tackling some of the root causes of irregular migration; vi) Contribution to energy security and energy supply cost reduction related to the fossil fuel import bill; vii) sustainable and climate-friendly transport and logistics chains improved. A results framework will be developed to monitor the impacts achieved.

When relevant, indicators as approved in the context of EUBEC Platform and included in the list in Annex 2, will apply; additional indicators will be agreed at the level of specific proposals. Disaggregation by gender (when applicable and feasible) shall be pursued.

Complementarity/Risk of potential overlap with other Investment Windows:

Complementarity and potential overlaps exist with all the Investment Windows, e.g.: Waste-to-energy, renewable energy and energy efficiency in agri-business (Agriculture); Climate services, smart-metering (Digitalization); Renewable energy, energy efficiency and sustainable mobility and transport in urban and peri-urban environments (Sustainable cities); ESCOs and small sustainable energy companies (MSME Financing).

Expected minimum Private Sector involvement: at least 30%-40% of final investment volumes, on a portfolio (PIP) basis, are expected to be financed by the private sector (including commercial banks).

3. Supporting Policy Actions (links to pillars 2 and 3)

Links will be established to adequately coordinate between the investment pillar (pillar 1) and enabling policies (pillar 3) to foster stable investment climate and conducive business environments as well as technical assistance (pillar 2). Implementation of this window may thus be accompanied by sector policy dialogue with the partner countries and by in-country reform processes supported by the Commission, in order to foster an enabling environment including alignment of energy and transport policies, regulations and planning with climate change objectives, under which the policy goals can materialise and increased investments can take place.

Supporting policy actions may include:

- On the energy sector enabling environment and governance side, the need is to consolidate suitable legislative, fiscal and regulatory frameworks that facilitate investments and mobilise funding for energy projects including measures to target financial and technical support to minimise investment risks and develop national supply chains; energy planning masterplans that allow the integration of renewable sources' into the grid, including cost-effective grid investment and connections; electricity and rural electrification masterplans that foresee a role for innovative financing and private sector concessionaires; tariff reforms towards increased cost reflectiveness and balanced and cost reflective tariff structures that ensure long term financial stability of utilities; utility financial reforms and possible financial restructuring towards becoming creditworthy; review of fossil fuels energy subsidies' policy and other existing market distortions; promoting the implementation of transparent market and utility practices as well as demonstrating the benefits of well-structured public/private partnerships.

- Addressing synergies and inter-linkages between climate change, renewable energy, energy efficiency, sustainable transport and national development plans, including the implementation of the National Determined Contributions (NDCs).
- Policies to promote energy and resource efficiency (in particular in the building sector by developing, adopting and enforcing "green building codes" legislation). The existence of Sustainable Energy Action Plans (SEAPs) and National Energy Efficiency Action Plans (NEEAPs) in several countries across Africa and the Neighbourhood Regions can provide a framework for gap assessment, prioritisation and monitoring.
- On transport, frameworks for the management of multimodality, for the clear prioritisation of national investments related to the extension of the TEN-T network, and reforms related to the railway system should be in place.
- On investment preparation in the energy sector, the needs are: to improve the creditworthiness of the off-takers; to increase transparency and ensure the equitable availability of country/sector/project information; to enable the public sector to consult with industry and stakeholders in designing project support schemes such as FIT; to ensure a level playing field and increase awareness of existing risk mitigation instruments; and raising awareness among the public of the benefits of renewable energy.
- Policies and plans to enhance the creation of an energy efficiency and Energy Services Company (ESCOs) markets in order to enhance innovative financing schemes for energy efficiency, combined heat and power and renewable energy. The role of local authorities and cities, as well as private sector (MSMEs), should be promoted in line with the national plans and in order to contribute to the growth of a local supply chain and replication.
- Analysis to overcome barriers during the project development stage, including scale-up and aggregation of projects, project and contracts standardisation, helping governments (local and national) to build a strong pipeline of renewable energy and energy efficiency and sustainable transport projects. This could be particularly important at the municipal level and coordination with the Sustainable Cities Window and the MSMEs window needs to be ensured
- Structured and strategic policy dialogue and stakeholder engagement with increasing private sector mobilisation, including MSMEs, as well as inclusion of non-state actors and civil society.

In line with the policy actions detailed above, technical assistance may include:

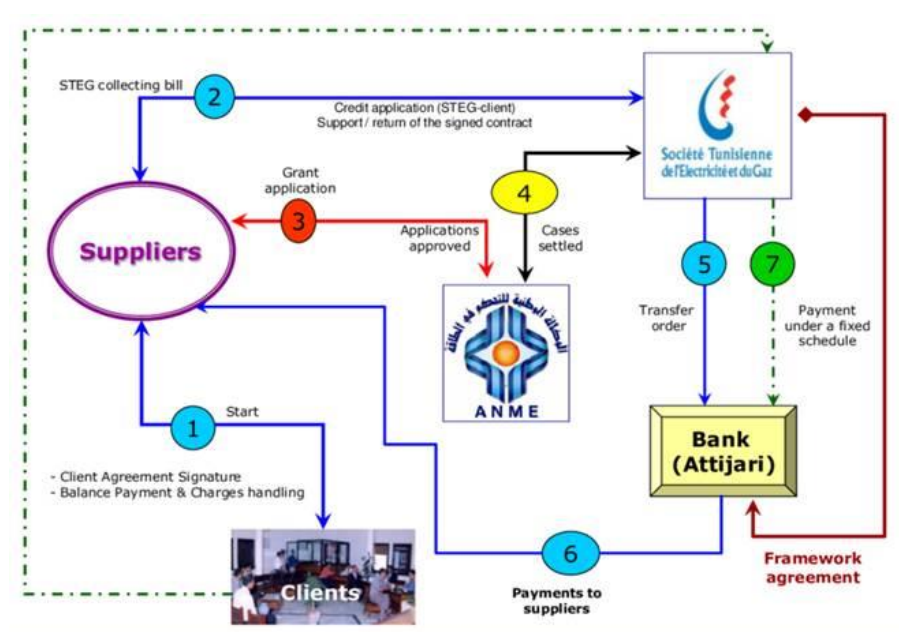
- Fine tuning energy policies and regulatory frameworks to allow for increased investments in renewables and energy efficiency and in facilitating the implementation of the investment projects needed to meet SDG7 and SDG 13.
- Support focused on barriers identified during the project development stage as well, including for the scale-up and aggregation of projects and contracts standardisation.

This could be particularly important at the municipal level and coordination with the Sustainable Cities Window and the MSMEs window needs to be ensured.

ANNEX 1: Examples

Utility demand side EE programme

The Prosol programme (launched in 2005) is a facility designed by the Tunisian Ministry of Energy, the National Agency for Energy Management (ANME) and the UNEP. Its goal was to accelerate the deployment rate of solar water heaters in the Tunisian residential sector. In the initial phase (shown in the diagram below) credit was provided directly to equipment suppliers in the form of vendor finance with on-bill repayment by customers via STEG, the Tunisian state owned utility. In the second phase, finance was provided by commercial Banks directly to households with on-bill repayment to STEG and in both cases with STEG providing guarantees against the risk of its customers defaulting, which lowered the average financing costs for end users by 5-6% (according to data provided by UNEP).



Innovative approach to financing of renewable energy projects

Climate Investor One (CIO) is designed to remove the current market failures and inefficiencies in the development and finance of renewable energy projects in many developing countries. CIO provides expertise, technology and financing to renewable energy projects for low and lower-middle income countries, especially in Africa, by mobilizing private sector financing at scale supported by enabling public sector funding. It combines three investment funds into one facility to finance renewable energy projects at three specific stages of the project lifecycle.

- Development Fund to reduce development times and improve bankability of projects.
- Construction Equity Fund (CEF) to provide a single source of equity finance to fund construction and progress projects to an operational stage.

- Refinancing Fund to provide long-term and low risk debt during operations.

The US\$ 500M CEF will provide capital to Project Companies in the form of equity (up to 75% of the construction costs) and enable Project Companies to reach the operational stage without a need for debt financing. The project sponsor will provide for the remaining capital, 25% or more of total construction costs.

The activities of the CEF will therefore reduce (i) the time required to progress projects from the development phase to the start of construction of the project and (ii) the overall funding requirements of the project by removing fees, reserve accounts and other costs associated with project finance debt.

On an optimal risk-return basis, CEF offers three different investment tranches; a junior equity / first loss tranche (Tier 1); an ordinary equity tranche (Tier 2) and; a preferred equity tranche (Tier 3) providing investment opportunities to Donors, DFIs and institutional investors, respectively. The structure of the funding allows for the priority ranking of cash flow entitlements in a way that appeal to the different investor types.

Energy Guarantee Facility in Africa

The African Energy Guarantee Fund (AEGF) is a first-in-kind guarantee of up to USD 50 million provided by EIB under the Impact Financing Envelope of the ACP Investment Facility to support Munich Re in the provision of reinsurance services for private sector investors in African energy projects. The facility will boost the availability of insurance coverage for political and (sub) sovereign non-payment risks, which are considered critical bottlenecks in the provision of private financing for energy projects in Africa.

The Facility will have a tenor of up to 20 years. Munich Re will initially be the sole reinsurer, but the Facility will benefit from an open architecture to potentially include other participants in the future. Other key partners are the Africa Trade Insurance Agency (ATI) and the Islamic Corporation for Investment Insurance and Export Credit (ICIEC), part of the Islamic Development Bank (IDB) Group as primary insurers. Munich Re is also creating an agency solely dedicated to managing AEGF to ensure the expected EU standards and impact reporting.

Projects eligible to receive AEGF-backed insurance will meet SE4All objectives according to EU guidelines (renewable energy, energy access and energy efficiency); be subject to EU environmental, social, procurement and integrity standards; meet pre-agreed portfolio quality conditions; and take place in a member country of the primary insurers (25 Sub-Saharan African countries).

ANNEX 2: Indicators

SUSTAINABLE ENERGY		
OUTPUT INDICATORS	UNIT	DEFINITION
Transmission and distribution lines installed or upgraded	Km	The indicator covers power transmission and distribution lines. It is the measure of the ground distance traversed, in kilometres.
New connections to electricity	Nr.	Number of new connections to the grid. Only new connections resulting from a project are counted; those already connected to the grid and receiving improved services through a project are not counted.
Additional capacity from renewable energy sources	MW	Gross generating capacity of a power generation project from renewable energy sources. A project may involve construction of a new power plant or refurbishment of an existing plant.
OUTCOME INDICATORS	UNIT	DEFINITION
Population benefitting from electricity production	Nr. of households	The number of households which are estimated to benefit from new electricity supply from the project.
Power production	GWh/year	Total net annual average electricity generated by project, independently of its maximum capacity.
Variation CO2 / Greenhouse gases	CO2 ktons equivalent / year	Amount of CO2 / GHG emissions generated for a typical year of operation by a project compared with the baseline scenario.
Energy efficiencies	GWh/year	Energy savings as a result of project against no project or most likely alternative (e.g. loss reduction in generation, distribution, etc.)

TRANSPORT		
OUTPUT INDICATORS	UNIT	DEFINITION
Length of new or upgraded roads	km	Total length of the road built or upgraded through the project. This indicator will refer to paved roads and in general cover motorways, highways, main or national roads, secondary or regional roads.
Length of new or upgraded public transport lanes.	km	Total length of public transport lanes including bus lane, tramline or metro tracks built or upgraded.
OUTCOME INDICATORS	UNIT	DEFINITION
Users of new or upgraded roads	vehicle per day	Average Annual Daily Traffic. All vehicle will be counted, including those of traffic that existed before upgrading, diverted traffic, traffic generated as a result of road improvement, as

		well as growth in each of these categories.
Public transport users	Nr/year	Total public transport users indicating those shifted from non-public transport modes to public transport modes as a result of the project.

CROSS SECTOR INDICATORS (Application subject to current practices and methodologies by Financial Institutions)		
INDICATORS	UNIT	DEFINITION
Jobs sustained / created	Number (FTE)	Jobs sustained / created as a result of the project (methodology used to be made transparent)
Total number of beneficiaries	Nr.	Estimated number of people with improved access to services (financial services, social and economic infrastructure, etc.)
Number of beneficiaries living below the poverty line (whose living conditions are improved by the project)	Number (and/or %)	Sub-group of the above (if applicable), (to be made transparent which reference point has been used, e.g. national or international definitions of poverty)
Variation CO2 / Greenhouse gases	CO2 ktons equivalent / year	Amount of CO2 / GHG emissions generated for a typical year of operation by a project compared with the baseline scenario.