



EN

THIS ACTION IS FUNDED BY THE EUROPEAN UNION

ANNEX 1

to the Commission Implementing Decision on the financing of the annual action plan in favour of the Republic of Botswana for 2022

Action: Accelerating Sustainable and Productive Investment in Renewable Energy & Efficiency (ASPIRE)

ANNUAL PLAN

This document constitutes the annual work programme within the meaning of Article 110(2) of the Financial Regulation, and action plans/measures in the sense of Article 23 of the NDICI-Global Europe Regulation.

1. SYNOPSIS

1.1. Action Summary Table

1. Title CRIS/OPSYS business reference Basic Act	Accelerating Sustainable and Productive Investment in Renewable Energy & Efficiency (ASPIRE) CRIS number: NDICI AFRICA/2022/43446 OPSYS number: ACT-60880 / JAD.977191 Financed under the Neighbourhood, Development and International Cooperation Instrument (<u>NDICI-Global Europe</u>)
2. Team Europe Initiative	No
3. Zone benefiting from the action	The action shall be carried out in Botswana
4. Programming document	Republic of Botswana. Multi-Annual Indicative Programme 2021-2027
5. Link with relevant MIP(s) objectives / expected results	Specific objective SO 1.1: Promote and increase access to affordable, reliable and sustainable energy through the expansion of renewable energy generation Expected results: <ul style="list-style-type: none">• Energy market reforms and a more conducive business environment supported• Renewable energy generation capacity increased (solar and wind)• Increased access to energy in rural areas through decentralised innovative renewable solutions (off-grid and on-grid systems)• Access to cleaner cooking solutions increased• Energy efficiency promoted at public and private level through enhancements of the regulatory enabling framework and standards

PRIORITY AREAS AND SECTOR INFORMATION				
6. Priority Area(s), sectors	Priority area 1: Green Transformation DAC code: 232			
7. Sustainable Development Goals (SDGs)	Main SDG: 7 – Ensure access to affordable, reliable, sustainable and modern energy for all Other significant SDGs (up to 9) and where appropriate, targets: 13 – Take urgent action to combat climate change and its impacts; 5 – Gender Equality			
8 a) DAC code(s)	23110 – Energy policy and administrative management 15% 23210 – Energy generation, renewable sources – multiple technologies 30% 23230 – Solar energy for centralised grids 15% 23240 – Wind energy for water lifting and electric power generation 10% 15110 – Public sector policy and administrative management 20% 23040 – Electrical transmission and distribution 10%			
8 b) Main Delivery Channel	European Commission - Development Share of Budget - 42001			
9. Targets	<input type="checkbox"/> Migration <input checked="" type="checkbox"/> Climate <input type="checkbox"/> Social inclusion and Human Development <input checked="" type="checkbox"/> Gender <input type="checkbox"/> Biodiversity <input type="checkbox"/> Education <input type="checkbox"/> Human Rights, Democracy and Governance			
10. Markers (from DAC form)	General policy objective @	Not targeted	Significant objective	Principal objective
	Participation development/good governance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Aid to environment @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender equality and women's and girl's empowerment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Trade development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, maternal, new-born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disaster Risk Reduction @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Inclusion of persons with Disabilities @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrition @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Principal objective
	Biological diversity @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Combat desertification @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Climate change adaptation @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Internal markers and Tags:	Policy objectives	Not targeted	Significant objective	Principal objective
	Digitalisation @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	digital connectivity digital governance digital entrepreneurship digital skills/literacy digital services	YES <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
	Connectivity @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	digital connectivity energy transport health education and research	YES <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
	Migration @ (methodology for tagging under development)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reduction of Inequalities @ (methodology for marker and tagging under development)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Covid-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	BUDGET INFORMATION			
12. Amounts concerned	Budget line(s) (article, item): BGUE-B2022-14.020122-C1-INTPA Total estimated cost: EUR 5 500 000 Total amount of EU budget contribution EUR 5 500 000			
MANAGEMENT AND IMPLEMENTATION				
13. Type of financing	Direct management through: Procurement as set out in section 4.3.1			

1.2. Summary of the Action

Botswana's Total Primary Energy Supply (TPES) is largely based on fossil fuels (oil products and coal), complemented by waste to energy and biomass (the last one used in a traditional way, mainly for cooking). Electricity production relies on two major coal-fired power plants, a number of diesel generation units and cross-border imports from South Africa via the Southern African Power Pool. All this is so despite a considerable potential for renewable energy, most notably solar energy, wind energy and modern bioenergy. Unfortunately, this potential remains largely unexploited.

The country has ambitious plans to exploit this untapped potential: its Integrated Resource Plan (IRP) states that renewable energy should account for at least 15% of the electricity mix by 2030, while Botswana's Vision 2036 calls for a 50% renewable energy contribution to the energy mix by March 2036.

The use of renewable energies and energy efficiency is low in the country due to the existence of other energy sources, a partial lack of specific institutional capacity, insufficient support mechanisms and an incomplete regulatory framework. Insufficient skilled and experienced sustainable energy specialists and lack of awareness in the general population are other barriers to the development of sustainable energy markets.

This Action will address these issues in the framework of the EU Multi-Annual Indicative Programme (MIP) 2021-2027 for Botswana. The Action will contribute to the MIP Green Transformation Priority Area, Specific Objective 1.1: *Promote and increase access to affordable, reliable and sustainable energy through the expansion of renewable energy generation*, in line with:

- SDG 7 – affordable clean energy
- SDG 13 – climate change actions
- SDG 5 – gender equality
- EU priorities included in the Joint Communication *Towards a Comprehensive Strategy with Africa*
- The European Green Deal
- The EU Global Gateway
- The EU-Africa Green Energy Initiative
- The EU Gender Action Plan III

Therefore, further to the assessment of Botswana's energy system and energy stakeholder consultations, the Overall Objective (Impact) of this action is to promote an energy transition towards inclusive, sustainable and modern energy and the Specific Objectives identified are:

- To strengthen institutional capacities and regulatory reforms
- To promote energy efficiency measures and actions
- To increase renewable energy generation and inclusive energy access using locally available energy sources

The above Outcomes are directly linked to the expected results of the Specific Objectives 1.1 ("Promote and increase access to affordable, reliable and sustainable energy through the expansion of renewable energy generation") of the 2021-2027 MIP.

Main activities proposed for the implementation of previous Specific Objectives are as follows:

- Capacity building for officials of public entities;
- Capacity building for renewable energy and energy efficiency specialists;
- Revision and upgrade of the institutional and regulatory frameworks;
- Development and adoption of standards for renewable energy and energy efficiency equipment;
- Support to elaboration, revision and implementation of strategies and action plans;
- Realisation of feasibility studies for renewable energy and energy efficiency projects;

- Organisation of awareness raising campaigns for various target groups;
- Implementation of pilot projects (in particular in the energy efficiency field).

2. RATIONALE

2.1. Context

As a landlocked country with a small population of just above two million, Botswana has made remarkable socio-economic progress since independence, transitioning from one of the least developed countries in the world to an upper-middle income country (UMIC) within a few decades. This was made possible thanks to a model of good governance, political stability and judicious management of its mineral resources. Despite these achievements, Botswana still faces substantial structural challenges due to its economic dependency on one single and finite commodity (i.e. diamonds). High levels of inequality, youth unemployment and rural poverty persist. In addition, Botswana is extremely vulnerable to climate change and recurrent droughts due to its semi-arid climate.

The COVID-19 pandemic has added to these challenges and intensified some of the macro-economic and social pressures that the country already faced, particularly for those groups in vulnerable situations (people living in poverty, older persons, people living with disabilities, etc.). Domestic growth contracted by 8,5% in 2020, in particular due to the slump in the tourism and mining sectors, making Botswana one of the hardest hit countries in Sub-Saharan Africa.

Botswana's aspiration, as stated in its *Vision 2036*, is to reach high-income status by 2036 and to shift away from a natural resource-based growth model towards a knowledge-based economy. It seeks to promote equal opportunities and prosperity for all, leaving no one behind. *Vision 2036* identifies four pillars that will support these aspirations, within the auspices of creating prosperity for all citizens. These pillars are Sustainable Economic Development, Human and Social Development, Sustainable Environment and Governance, as well as Peace and Security. Botswana also remains committed to its National Policy on Gender and Development, which adopted gender mainstreaming as a core strategy for sustainable development¹.

In September 2020, in the wake of the COVID-19 pandemic, the Government of Botswana developed an Economic Recovery and Transformation Plan (ERTP) to support the restoration of economic activity and incomes, facilitate economic growth, accelerate economic transformation and build the resilience of the economy. The ERTP recognises also the need to "build-back better" and to factor in a "green recovery" element in order to build stronger socio-economic resilience and sustainability. It also identifies several strategic initiatives, including the construction of renewable energy productive infrastructures. *Vision 2036*, the National Development Plan 11 and the ETRP were drafted taking into account global, continental and regional commitments covering energy transition and climate change, such as Agenda 2030, the African Union's Agenda 2063 and the Paris Agreement.

More recently, in 2021, the Government approved the National Energy Policy, which is anchored on equity as a main principle, and calls for energy to be accessible to all, especially the people living in poverty and in disadvantaged situations. The NEP also recognises the different energy needs of men and women and requires the consideration of these differences into energy strategies and programmes during formulation and implementation².

The EU aims to accompany the Government in its ambition to reach high-income status by fostering economic diversification, developing human capital and building resilience to climate change. The 2021-2027 Multiannual Indicative Programme for Botswana focuses on **two interlinked priority areas**: (1) Green Transformation and (2) Economic Diversification and Jobs. Under the **Green Transformation** priority area, EU support will target the promotion of sustainable energy, biodiversity conservation and circular economy. Under the **Economic**

¹ https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/BWA/INT_CEDAW_STA_BWA_34126_E.docx

² <http://www.bera.co.bw/downloads/National%20Energy%20Policy%20Final%20April%202021.pdf>

Diversification and Jobs priority area, EU support will target investment promotion and trade, digital transformation and skills development.

The proposed programme seeks to support the Government's efforts in favour of economic diversification and green recovery by focussing assistance in the area of sustainable energy. EU support will specifically promote the expansion of renewable energies in the energy mix and the promotion of energy efficiency measures and actions, and thereby embark on a 'just transition' path. Sustainable Energy actions are linked with the aims of the EU's Global Gateway strategy and investment package, constituting concrete measures to boost investments to support Africa's green economic recovery. It is indeed foreseen to use the technical assistance provided under this programme to leverage funds from DFIs and the private sector in view of ramping-up investments in the sustainable energy sector.

No TEIs are currently foreseen in Botswana. The scope for a TEI has been restricted due to the limited presence of EU MS (Germany, France) and the lack of bilateral envelopes. Options remain to pursue cooperation with Botswana through a Team Europe approach via means that go beyond direct financial assistance (e.g. expert exchanges, private sector engagement and/or policy dialogue).

2.2. Problem Analysis

Botswana is facing several environmental and socio-economic problems related to energy generation and consumption. The primary one is an electricity system largely based on fossil fuels, entailing high emissions of greenhouse gases (GHG). The total electricity supplied in 2020 was 3,925 GWh, 63% of which was generated from coal and 8% from diesel; most of the rest was imported. The energy sector is the largest contributor to CO₂ emissions, with electricity generation being a primary contributor: in 2015 the energy sector accounted for approximately three quarters of total national direct GHG emissions. The installation of new renewable energy plants will therefore be critical to reducing GHG emissions. According to the National Determined Contribution (NDC) under the Paris Agreement, Botswana aims at decreasing GHG emissions by 15% between 2010 and 2030, mainly through energy sector initiatives.

The exploitation of untapped renewable energy potential will have further considerable positive environmental and socio-economic impact by improving the country's energy independence and reducing energy poverty. To meet its peak power demand, Botswana has to import electricity from the Southern Africa Power Pool (SAPP), mainly from South Africa (around 28% of total electricity supply in 2020). Given appropriate action and support, the renewable energy sector will also help create new jobs for women and for youth entering the labour market. It will also contribute to the realisation of human rights linked to basic service delivery, such as health and education, that benefit from improved access to energy and digital connectivity.

Botswana is well suited for solar power generation thanks to a mix of positive factors: high levels of solar irradiation, low population density, and abundant land availability. The country also displays good wind potential in some regions. Despite these elements, the contribution of renewable energy to the total electricity generation mix is close to zero.

The Government of Botswana has set a national electricity access target of 100% by 2030, and solar energy would help to address the problem of lack of electricity access, which mainly affects certain rural areas. National access to electricity stands at 64.8%, with consistent differences between urban areas at 81% vs. rural areas at 28%, which is a low value for an upper middle-income country (UMIC). The high cost of connection to the grid is one of the barriers for energy access in many regions, in particular for female-headed households³.

In the past, the country has made some efforts in terms of energy efficiency policy frameworks and energy efficiency interventions, but it currently does not have a clear regulatory framework in some key fields, such as

³ https://www.climateinvestmentfunds.org/sites/cif_enc/files/gender_and_re_digital.pdf

Minimum Energy Performance Standards (MEPS) and energy efficiency labelling for appliances. Indeed, the Government of Botswana recognised energy efficiency as a key to improving resource usage: energy efficiency would help in reducing the need for additional generation capacity to reach universal electrification by 2030 and to satisfy the increased energy demand due to the improvement of quality of life of the general population (based on IEA data, the Total Primary Energy Supply of Botswana increased from 1.22 Mtoe in 1990 to 2.64 Mtoe in 2019). Energy efficiency would also be a significant element in improving energy security, in light of the current dependence on electricity imports from abroad.

Identification of main stakeholders and corresponding institutional and/or organisational issues (mandates, potential roles, and capacities) to be covered by the action:

a) Botswana institutions

The **Ministry of Mineral Resources, Green Technology and Energy Security (MMGE)** is the lead policymaking government authority (policy approval by cabinet or parliament) related to energy supply and demand management. Following an audit of energy policies and programmes in Botswana⁴, the Ministry has made an effort to better integrate gender into the sector, reinforced by its 2021 National Energy Policy.

The **Project and Energy Development Unit (PEDU)** is responsible for assigning ownership to major projects and will be central to the tendering and procurement process for IPPs, which include those listed under the Integrated Resource Plan (IRP).

The **Department of Energy (DoE) of the MMGE** is mandated to implement and coordinate the national energy policy and programmes and is separated into sections, which are led by project managers including Energy Efficiency, Renewable Energy, Statistics, Strategy. ‘Smaller’ projects fall under the responsibility of the department which includes the Rooftop Solar Project (10 MW) and the Off-Grid Project Guidelines. Other ongoing initiatives include a biodiesel project and the primary school mini grids with the Ministry of local government.

The **Botswana Energy Regulatory Authority (BERA)** is the national energy regulator, established in 2016 under the BERA Act (2016) and is responsible for providing a regulatory framework for the regulated sectors, including electricity, coal and renewable energy resources with duties that encompass registering Independent Power Producers (IPPs) below 100 kW, licensing IPPs above 100 kW, regulating transmission and distribution (T&D) networks, implementing tariffs in relation to generation as well as regulating the import and export of electricity.

The **Botswana Power Corporation (BPC)** is a state-owned vertically integrated utility in charge of the bulk of generation as well as transmission, distribution and supply. The BPC embarked a few years ago on a gender mainstreaming process and developed a Gender Action Plan⁵. Opportunity exists to strengthen these processes and build from this experience to support more gender-responsive policies and services

The **Botswana Bureau of Standards (BOBS)** is a parastatal formed in 1997 through the Standards Act, under the Ministry of Investment, trade, and Industry. BOBS is the national standards body of Botswana and is responsible for standardisation and quality assurance, including the adoption of technical standards relevant to electricity, renewable energy, and energy efficiency.

Independent Power Producers (IPP): the country is moving away from the single buyer model to include IPPs in generation where PEDU will assume responsibility for the tender procedures, with BERA as the independent regulator. More in general, the private sector will benefit from an enhanced institutional and regulatory framework

⁴The audit was conducted within the framework of a EU funded project. https://www.researchgate.net/profile/Leonard-Dikobe/publication/262104964_Gender_Audit_of_Energy_Policies_and_Programmes_-_The_Case_for_Botswana/links/0deec536a73b56dc44000000/Gender-Audit-of-Energy-Policies-and-Programmes-The-Case-for-Botswana.pdf

⁵ https://www.energia.org/assets/2015/02/06.-Case_Study_Botswana.pdf

and facilitated dialogue with relevant authorities. In addition, it will benefit from synergies sought with other initiatives supported by EU such as the EFSF+.

b) International institutions with sustainable energy interests in Botswana

African Development Bank (AfDB): the AfDB engagement in Botswana will be through a Technical Assistance grant of USD 1 million with the Botswana Energy Regulatory Authority (BERA) on the following components: policy reforms and BERA operationalisation for Integrated Resource Plan (IRP) implementation; grid code and licensing procedures elaboration; The Consultants who will be engaged are not expected to be embedded within BERA.

World Bank (WB): the World Bank is finalising a new RE Roadmap that will be the key study for guiding WB renewable energy project implementation in the country. This Roadmap will be largely based on the Integrated Resource Plan (IRP) recommendations. The World Bank is focusing in particular on the following renewable energy projects: 200 MW of solar PV projects and 2x50 MW of wind energy projects. The WB received a request from the Ministry of Finance for a Technical Assistance of about USD 5 million for the early preparation of these projects. Feasibility studies, wind measurement campaigns in two potential sites for two years, and transaction advisory services will be carried out. A study for the integration of renewable energies into the grid was already launched separately.

Japan International Cooperation Agency (JICA): in Botswana, JICA is focused on grid-connected IPPs and discussions have already started with the GoB to implement a new technical assistance aimed at enhancing the Ministry's operational capacity. The tentative scope of JICA's actions relates to: 1) institutional and policy framework (bidding system, development of standardised PPA format and FIT guidelines); 2) governance to supervise development and operation of on-grid renewable energy generation by the private sector; 3) capacity building on operation and management of the grid with variable renewable generation and utilisation of surplus electricity, and provision of advice on technical studies related to grid and feasibility of solar energy development. The indicative dates for the implementation of this TA are June 2022-June 2024.

Mega Solar Initiative: the Mega Solar Initiative is a partnership between Power Africa, the Governments of Botswana and Namibia, the World Bank Group and the African Development Bank (AfDB) to support the development of Southern Africa's largest solar-generation complex, which is estimated to result in 2–5 GW of installed renewable power. The first phase of the Mega Solar initiative is focused on the competitive procurement of 300-500 megawatts of solar power in Namibia and Botswana. Power Africa is coordinating partner activities, supporting technical studies and institutional capacity building, and working with counterparts to establish the governance structures that will guide country-level project implementation.

United Nations Development Program (UNDP): in cooperation with the Ministry of Environment and the Botswana Institute for Technical Research and Innovation (BITRI), UNDP has developed a biodigesters pilot project to produce and use biogas for electricity generation, cooking and heating. Ten districts were selected in the South-Eastern part of the country. Based on the results in other African countries, BITRI has elaborated the technical specifications and the size of the biodigesters suitable for Botswana. Thanks to the training activities for the masons (they are dome biodigesters), UNDP was able to develop skills and capacities for constructing and maintaining these biodigesters, and it would like to enlarge the project to other areas of the country

SACREEE: the Southern African Development Community Centre for Renewable Energy and Energy Efficiency (SACREEE) was established by SADC Member States in 2015 to contribute to increased access to modern energy services and improved energy security across the SADC Region through the promotion of market-based uptake of renewable energy and energy efficient technologies and energy services. Among various projects, SACREEE is currently supporting the development and adoption of MEPS for selected appliances across SADC member States.

Capacity building needs in the public service will be informed by an assessment of knowledge and skills pertaining to the integration of IPP-generated renewable energy into the national grid, in particular: competitive tendering

processes, elaboration of a grid code, management of the dispatching centre covering variable renewable energies, and elaboration of PPA contract models.

The final beneficiaries are the people of Botswana, women and men, boys and girls, in all their diversity who benefit from an enhanced access to clean and secure energy and energy efficiency measures but also from enhanced public service delivery and new opportunities created. Meaningful engagement with Civil Society Organisations will be promoted throughout the action, particularly with women's and youth organisations

3. DESCRIPTION OF THE ACTION

3.1. Objectives and Expected Outputs

The Overall Objective (Impact) of this action is to contribute to Botswana's sustainable and inclusive energy transition.

The Specific Objectives (Outcomes) of this action are:

1. To strengthen institutional capacities and regulatory reforms
2. To enhance energy efficiency measures and actions
3. To increase renewable energy generation and inclusive energy access using locally available energy sources

The Outputs to be delivered by this action contributing to the corresponding Specific Objectives (Outcomes) are:

1. To strengthen institutional capacities and regulatory reforms

- 1.1 Strengthened capacity of public officials at MMGE, BERA and BPC to implement and meet national sustainable energy policies and targets
- 1.2 Improved regulatory framework related to renewable energy.

2. To enhance energy efficiency measures and actions

- 2.1 Improved regulatory framework for energy efficiency in public and private sector
- 2.2 Enhanced awareness and capacity to implement energy efficiency measures in public and private sector
- 2.3 Better implementation of energy audits and energy efficiency projects across the public and private sector

3. To increase renewable energy generation and inclusive energy access using locally available energy sources

- 3.1 Increased renewable energy generation capacity from solar and wind
- 3.2 Increased rural electrification through off-grid renewable solutions
- 3.3 Increased number of solar energy systems (thermal and PV) in buildings
- 3.4 Strengthened quality requirements for renewable energy systems

3.2. Indicative Activities

Activities relating to Output 1.1: Strengthened capacity of public officials at MMGE, BERA and BPC to implement and meet national sustainable energy policies and targets.

- Capacity building activities for MMGE officials (in particular PEDU officials) and other public officials in planning and supervising power system development aiming of maximising renewable energy generation in the electricity mix

- Capacity building of public officials for project management, monitoring and evaluation. applying a human rights based approach and mainstreaming gender.
- Support to the implementation of the National Renewable Energy Roadmap covering grid connected renewable energy systems and off-grid renewable energy systems (isolated mini-grids and autonomous systems)
- Capacity building activities for PEDU, BPC, BERA staff and other public officials to implement a competitive, open tender process for developing wind and solar energy plants
- Conduct ad-hoc studies related to renewable energy generation potential, grid integration, storage and other issues dispatching/control room, capable of managing variable renewable energy injected into the national grid.
- Conduct feasibility study and master plan on green hydrogen , including as regards possible local industrial applications for green hydrogen and/or export potential
- Training Needs Assessment (TNA) and capacity building activities for BPC officials in order to carry out daily activities in the new dispatching/control room (among others).
- Capacity building activities for BPC officials and Technical Assistance for the elaboration of the Grid Code that which also covers variable renewable energy generation

Activities relating to Output 1.2: Improved regulatory framework related to renewable energy.

- Review of the Electricity Act to create a more conducive regulatory framework for renewable energy development and promotion
- Development and adoption of PPA contract models
- Development and adoption of competitive, open tender dossier templates

Activities relating to Output 2.1: Improved regulatory framework for energy efficiency in public and private sector

- Development and adoption of a new regulatory framework concerning the Minimum Energy Performance Standards (MEPS) and labelling framework for selected products in line with international practices and/or regional developments
- Implementation of a market watch scheme for MEPS
- Development and adoption of a new regulatory framework for energy performance of buildings
- Adaptation of building stock inventory for energy performance certification
- Creation of quality control mechanisms to monitor energy efficient building codes and building performance certificates compliance
- Development and adoption of a regulatory framework for the energy management of high energy consumers
- Creation of inventory of high energy consumers
- Implementation of a monitoring and verification scheme for the obligations of high energy consumers
- Development and adoption of a new regulation framework for professional qualifications and certification in Energy Management, including procedures and methodologies for the certification of Energy Managers, Building Certifiers and ESCOs
- Realization of the exams for delivering the certifications

Activities relating to Output 2.2: Enhanced awareness and capacity to implement energy efficiency measures in public and private sector

- Organisation of an awareness raising campaigns on energy efficiency for various target groups: the management of industrial companies; national manufacturers, importers, distributors and retailers of

energy consuming appliances; the management of building construction companies; national and local government officials; national and local banks; the management of commercial buildings; the general public, including women; high school and University students

- Organisation of capacity building activities for the following energy specialists: ensuring equal participation of women and men: architects for implementing the use of bioclimatic rules; energy specialists willing to become building certifiers for the certification of the energy performances of buildings; energy specialists willing to become Energy Managers
- Creation of a reliable and web-based system of energy data collection and analysis, in order to develop the national energy balance and to analyse quantifiable results for reaching energy efficiency and GHG emissions reduction targets
- Provision of TA and studies aimed at facilitating investments for distribution losses reduction

Activities relating to Output 2.3: Better implementation of energy audits and energy efficiency projects across the public and private sector

- Conduct of energy audits and retrofitting studies in pilot public building projects
- Conduct of energy audits in selected large energy consumers' facilities
- Implementation of energy efficiency pilot actions in public and private buildings and in large energy consumers' facilities

Activities relating to Output 3.1: Increased renewable energy generation capacity from solar and wind

- Measurement for one year of wind potential in two possible sites
- Conduct of pre-feasibility studies for utility-scale windfarms and solar plants grid-connected
- Support for tendering processes and transactional services
- Provision of upstream technical assistance for leveraging investments from DFIs and the private sector

Activities relating to Output 3.2: Increased rural electrification through off-grid renewable solutions

- Conduct of feasibility studies for the solar electrification of National Parks and neighbouring villages
- Development of a National Action Plan to replace diesel with solar PV for borehole pumps
- Organisation of an awareness raising campaign for farmers on replacing diesel by solar PV for borehole pumps
- Development and adoption of a new regulatory framework (incentives, obligations, standards, etc.) for the following off-grid applications: National Parks, Tourist sector, Boreholes pumping, PAYG market, Solar Mini-grids

Activities relating to Output 3.3: Increased number of solar energy systems (thermal and PV) in buildings

- Development of a Comprehensive Strategy and Action Plan for the installation of solar energy systems on buildings
- Development and adoption of a new regulatory framework for establishing targets, incentives, authorisation procedures, obligations of solar energy use in buildings
- Organisation of an awareness raising campaign for the general public concerning the use of solar energy (PV and thermal) in buildings and the incentives available.
- Specific awareness raising campaign for national and local government officials on the use of solar energy in public buildings

Activities relating to Output 3.4: Strengthened quality requirements for renewable energy systems

- Development and adoption of renewable energies equipment standards in line with international standards

- Creation of an Electrical Testing Laboratory under the Ministry's supervision. Providing capacity building support and technical equipment to a national testing laboratory for carrying out testing studies on renewable energy equipment while ensuring that market barriers are addressed/removed.
- Development and adoption of a new regulatory framework on market control of renewable energy equipment imported and/or manufactured in the country, in conjunction with the Botswana Bureau of Standards
- Development and adoption of procedures for the certification of installers of solar and other renewable energy equipment
- Organisation of trainings and capacity building activities for solar and other renewable energy installers ensuring equal participation of women and men.

3.3. Mainstreaming

Environmental protection & climate change

The action is expected to contribute to climate change mitigation through the promotion of renewable energy and energy efficiency and consequent GHG emissions reductions. Moreover, Strategic Environmental Assessments (SEA) will be promoted to ensure the integration of environment and climate change considerations in the broader strategic energy planning. Feasibility and pre-feasibility studies conducted in the context of this Action will include an environmental assessment wherever required by the national legislation. Outcome of the CRA (Climate Risk Assessment) screening: The Climate Risk Assessment (CRA) screening concluded that this action entails no risk (no need for further assessment) but climate-proofing of energy infrastructure and new RES investments will be addressed during implementation.

Gender equality and empowerment of women and girls

As per the OECD Gender DAC codes identified in section 1.1, this action is labelled as G1. This implies that this action will ensure that gender is adequately and effectively mainstreamed in particular within the energy institutions and in the energy sector. In Botswana, women tend to be excluded from decision-making processes around the sector and so have been unable to voice their energy needs⁶. The activities implemented within the framework of the Action will be gender-sensitive, and some more clearly targeting gender equality, for example: the development of entrepreneurial activities managed by a percentage of women (such as solar installation companies and ESCOs), training and certification of a percentage of women for solar modules installation, training and certification of a percentage of women in energy audits and energy management. Percentages will be set to significantly enhance female economic participation over and above baseline data. Whenever possible, the project will promote collection of gender-disaggregated data for better informed planning, monitoring and policy implementation. The action will also use indicators extracted from the Gender Action Plan III to ensure the contribution to the EU commitments on gender equality can be measured.

Human rights

This project will follow a rights-based approach. The action is based on the notion that sustainable energy plays a key role in powering sustainable development and the realisation of human rights. The action will increase access to sustainable energy and the electrification rate in rural and peri-urban areas. This way, equality between people will be promoted by reducing the urban-rural gap. The provision of reliable and affordable energy will reinforce other rights such as access to water, education, jobs, health, food, etc. Electrification of marginalised areas will bring new livelihood opportunities and economic activities, also for women and youth, while improving access to basic services (thus favouring the enhancement of human rights). The Action will support the right to decent work and the right to social security. Particular focus will be given to inclusive policies targeting women and girls.

Disability: N/A

Democracy: N/A

Conflict sensitivity, peace and resilience: NA

Disaster risk reduction:

⁶ <https://www.ctc-n.org/resources/where-energy-womens-business-national-reports-botswana-lesotho-and-swaziland>

This action contributes to DRR by supporting the capacity of the authorities in terms of climate vulnerability analysis and climate proofing of energy infrastructure.
Wherever possible, the Action will include crisis modifiers to ensure sufficient flexibility of activities' implementation vis-à-vis shocks, being they COVID related or natural disasters.

3.4. Risks and Lessons Learnt

Category	Risks	Likelihood	Impact	Mitigating measures
	Political momentum to pursue the energy and green transition may decrease	Medium	Medium	Continuous advocacy and policy dialogue through capacity building and information on new technologies in order to highlight the benefits of the energy and green transition
	Local content requirements included in all public tenders may become a disincentive to FDI financing	High	Medium	<ul style="list-style-type: none"> Continuous advocacy and policy dialogue. Regulatory framework reform
	Lack of coordination with other ICPs interventions may lead to overlap or inefficiencies	Medium	Medium	<ul style="list-style-type: none"> Creation of an ICP coordination committee and continuous consultations and exchanges with other international donors working in the energy sector of Botswana Continuous consultations and exchanges with the MMGE and other public entities of the energy sector
	Low interest among the general population in energy efficiency measures due to unaffordability for low and medium income families	Medium	Medium	<ul style="list-style-type: none"> Carefully designed and implemented awareness raising campaigns for the general population. Appropriate incentives and support mechanisms for low and medium income families
	Lack of knowledge on energy efficiency opportunities among the industrial managers leading to low interest in implementing energy efficiency measures	Medium	Medium	Dissemination of best practices (namely from other African countries)

Lessons Learnt:

- Local and international power producers showed their interest to engage in solar energy development and rural electrification in the country in recent tenders launched by BPC (Botswana Power Corporation): 166 offers were submitted for the construction and the operation of two 50 MW solar PV power plants and 111 offers were submitted for the deployment of hybrid networks in 20 rural areas.
- Local content requirements of recent solar photovoltaic tenders proved to be an impediment for the participation in the projects of some international donors and financial institutions (for example the European Investment Bank).
- Several photovoltaic and thermal solar systems were installed in recent years, but many of them showed a reduced life expectancy (typically around 5 years). IRENA blamed this on three factors: lack of maintenance, insufficient user training, and lack of technical support. Consequently, awareness raising among final solar energy users and capacity building for solar installers will be key for the development of the solar energy sector.
- As demonstrated by several international experiences, a clear regulatory framework should be developed and adopted to reduce the level of perceived risk that could discourage private sector participation in the renewable energy sector. This regulatory framework should include, among others: grid codes, which also cover variable renewable energies and storage systems; definition of roles and responsibilities of each entity (statal and parastatal) involved in the development of renewable energy projects; authorization procedures for the various types of renewable energy plants; possibility for self-producers to sell electricity excess; support mechanisms for fostering the construction and the operation of renewable energy projects; training and accreditation for installers; renewable energy equipment standards.

3.5. The Intervention Logic

Specific Objective 1: To strengthen institutional capacities and regulatory reforms.

The underlying intervention logic for this action is that IF institutional capacities are strengthened (in particular of PEDU, Ministry of Energy, BPC and BERA officials) for planning and supervising power system development aimed at maximising renewable energy generation and for implementing a competitive tender process for developing wind and solar energy plants AND important regulatory reforms are developed and implemented for creating a more conducive regulatory framework for renewable energies, THEN public officials will be able to implement the activities needed for the operationalisation of the Integrated Resource Plan (IRP) so that current delays in the tendering process for IPP tenders will be reduced and the timeline included in the IRP will be respected.

Specific Objective 2: To enhance energy efficiency measures and actions.

The underlying intervention logic for this action is that IF a new energy efficiency regulatory framework is developed and adopted (MEPS, building energy performance, high energy consumers, professional qualifications and certification of energy efficiency specialists) AND quality control and market surveillance schemes are created and implemented AND awareness raising campaigns are deployed for several target groups (managers of industrial companies; manufacturers, importers, distributors and retailers of energy consuming appliances; managers of building construction companies; national and local government officials; managers of commercial buildings; the general public; high school and university students) and capacity building activities for several target groups (architects, energy specialists willing to become building certifiers for certification of the energy performance of buildings; energy specialists willing to become Energy Managers) AND energy audits and energy efficiency actions are implemented in pilot projects for retrofitting of buildings/factories in large public and private entities THEN energy efficiency measures and actions will be promoted and the following

goals will be reached: i) greenhouse gas emissions reduction; ii) decoupling energy use from economic growth; iii) enhancement of renewable energy and local energy sources contribution in the energy mix. All these goals are in line with SDG 7 and with the Overall Objective of the action (“Energy Transition”)

Specific Objective 3: To increase renewable energy generation and inclusive energy access using locally available energy sources.

The underlying intervention logic for this action is IF wind resource is measured in two possible sites AND feasibility studies for renewable energy plants implementation (on grid and off-grid) are carried out AND a new solar energy regulatory framework is developed and adopted (for off-grid renewable energies plants and on-grid solar PV installed in buildings) AND awareness raising campaigns concerning the use of solar energy are organised AND professional qualifications and certification schemes for solar PV and other renewable energies installers are developed and adopted AND capacity building activities for solar PV and other renewable energies installers are organised THEN the participation of the private sector, which is crucial to sound and sustainable development of the renewable energy sector, will be encouraged, renewable energy generation will increase and the following goals will be reached: i) greenhouse gas emissions reduction; ii) enhancement in the energy mix of the contribution of renewable energies locally available; iii) increase of the electrification rate in rural non-electrified areas thanks to renewable energies expanding the rights-holders’ access to energy, including women and groups in a vulnerable situation. All these goals are in line with SDG 7 and with the Overall Objective of the action (“Energy Transition”).

3.6. Logical Framework Matrix

Results	Results chain (a): Main expected results (maximum 10)	Indicators (a): (at least one indicator per expected result)	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
Impact	To contribute to Botswana's sustainable energy transition	1. Proportion of renewable generation as source of electricity (in %) 2. Jobs created in the sustainable energy sector (disaggregated by sex) 3. Proportion of population with access to electricity (disaggregated at least by sex) 4. Avoided GHG emissions (tonnes CO2eq)	1. Baseline: 1% 2. Baseline: TBD in inception phase baseline study 3. Baseline: 64% (2021) 4. Baseline: TBD in inception phase baseline study	1. 12% in 2025 2. To be determined in 2023 3. To be determined in 2023 4. To be determined in 2023	1. MMGE, national statistics and Annual Project Progress Report 2. MMGE, national statistics and Annual Project Progress Report 3. MMGE, national statistics and Annual Project Progress Report 4. MMGE, national statistics and Annual Project Progress Report	<i>Not applicable</i>

Outcome 1	To strengthen institutional capacities and regulatory reforms	<p>1.1 Number of public officials who received capacity building activities and trainings disaggregated by sex</p> <p>1.2 Extent of adjustment of the regulatory framework to foster renewable energy projects</p> <p>1.3 Number of IPP contracts concluded/ tenders launched</p>	<p>1.1 Baseline: 0 in 2022</p> <p>1.2 Regulatory framework unreformed in 2022</p> <p>1.3 - 0 in 2022</p>	<p>1.1 To be determined in 2023</p> <p>1.2 Regulatory framework reformed in 2024</p> <p>1.3 To be determined in 2023</p>	<p>1.1 Annual Project Progress Report</p> <p>1.2 Annual Project Progress Report</p> <p>1.2 Annual Project Progress Report</p>	Ensured political momentum supported by best practice capacity building and legislation reform is supportive of further RE market orientation and development
Outcome 2	To enhance energy efficiency measures and actions	<p>2.1 Number of new EE-related regulations adopted</p> <p>2.2 National energy consumption in ktoe</p> <p>2.3 Electric power losses in transmission and distribution (% of output)</p> <p>2.4 Number of EE pilot projects</p>	<p>2.1 0 in 2022</p> <p>2.2 Baseline: TBD in inception phase baseline study</p> <p>2.3 Baseline: 17%</p> <p>2.4: 0</p>	<p>2.1 To be determined in 2023</p> <p>2.2 To be determined in 2023</p> <p>2.3 To be determined in 2023</p> <p>2.4: To be determined in 2023</p>	<p>2.1 Annual Project Progress Report</p> <p>2.2 MMGE and national statistics</p> <p>2.3 Annual Project Progress Report, MMGE and national statistics</p>	Energy efficiency actors are willing to invest in this market thanks to the improvements to the regulatory framework

		supported with project's assistance				
Outcome 3	To increase renewable energy generation and inclusive energy access using locally available energy sources	<p>3.1 Renewable energy generation capacity installed (MW) with EU support</p> <p>3.2 Number of individuals disaggregated by sex with new access to electricity with EU support</p>	<p>3.1 Baseline: 0</p> <p>3.2: 0</p>	<p>3.1 To be determined in 2023</p> <p>3.2 To be determined in 2023</p>	<p>3.1 MMGE and national statistics</p> <p>3.2 MMGE and national statistics</p>	Renewable energy actors are willing to invest in this market thanks to the improvements to the regulatory framework
Output 1 relating to Outcome 1	Strengthened capacity of public officials at MMGE, BERA and BPC to implement and meet national sustainable energy policies and targets	<p>1.1.1 Number of public officials (disaggregated by sex) who received capacity building activities in planning and supervising power system development</p> <p>1.1.2 A Renewable Energy Roadmap covering on-grid and off-grid systems is developed and adopted</p>	<p>1.1.1 Baseline: 0 in 2021</p> <p>1.1.2 The RE Roadmap is not developed and adopted</p> <p>1.1.3 Baseline: 0 in 2021</p> <p>1.1.4 Power system studies not performed in 2021</p> <p>1.1.5 Training Needs Assessment (TNA) not undertaken and no BPC officials received capacity building activities in 2021</p>	<p>1.1.1 To be determined in 2024</p> <p>1.1.2 The RE Roadmap is developed and adopted</p> <p>1.1.3 To be determined in 2023</p> <p>1.1.4 Power system studies performed in 2024</p> <p>1.1.5 Training Needs Assessment (TNA) undertaken and number of BPC officials capacitated</p>	<p>1.1.1 Annual Project Progress Report</p> <p>1.1.2 Annual Project Progress Report</p> <p>1.1.3 Annual Project Progress Report</p> <p>1.1.4 Annual Project Progress Report</p> <p>1.1.5 Annual Project Progress Report</p>	Best practice capacity building is enables renewable energy generation

		<p>1.1.3 Number of public officials who received capacity building activities in project management, monitoring and evaluation (disaggregated by sex)</p> <p>1.1.4 Power system studies to identify equipment needed to build a dispatch/control room capable of managing variable renewable energy injected into the national grid are undertaken</p> <p>1.1.5 Training Needs Assessment (TNA) undertaken and number of BPC officials capacitated to carry out daily activities in the new dispatching/control room</p> <p>1.1.6 Capacity building activities for BPC officials and Technical Assistance to</p>		to be determined in 2023		
--	--	--	--	--------------------------	--	--

		prepare the Grid Code that also covers variable renewable energy generation undertaken (disaggregated by sex)				
Output 2 relating to Outcome 1	Improved regulatory framework related to renewable energy	<p>1.3.1 Status of revision of the Electricity Act</p> <p>1.3.2 Status of development and adaptation of PPA contract models</p> <p>1.3.3 Status of development of competitive tender dossier templates</p>	<p>1.3.1 Electricity Act not reviewed in 2021</p> <p>1.3.2 PPA contract models not developed or adopted in 2021</p> <p>1.3.3 Competitive tender dossier templates not developed or adopted in 2021</p>	<p>1.3.1 Electricity Act reviewed in 2024</p> <p>1.3.2 PPA contract models developed and adopted in 2024</p> <p>1.3.3 Competitive tender dossier templates developed and adopted in 2024</p>	<p>1.3.1 Annual Project Progress Report</p> <p>1.3.2 Annual Project Progress Report</p> <p>1.3.3 Annual Project Progress Report</p>	PPA contract models and competitive tender dossier templates mitigate the risks associated with projects development
Output 1 relating to Outcome 2	Improved regulatory framework for energy efficiency in public and private sector	<p>2.1.1 Status of development of a new regulatory framework concerning MEPS and labelling</p> <p>2.1.2 Status of implementation of a market watch scheme on MEPS</p> <p>2.1.3 Status of development of a new regulatory</p>	<p>2.1.1 Regulatory framework concerning MEPS and labelling not developed or adopted in 2021</p> <p>2.1.2 Market watch scheme on MEPS not implemented in 2021</p> <p>2.1.3 Regulatory framework concerning energy performance of</p>	<p>2.1.1 Regulatory framework concerning MEPS and labelling developed and adopted in 2024</p> <p>2.1.2 Market watch scheme on MEPS implemented in 2024</p> <p>2.1.3 Regulatory framework concerning energy performance of</p>	<p>2.1.1 Annual Project Progress Report</p> <p>2.1.2 Annual Project Progress Report</p> <p>2.1.3 Annual Project Progress Report</p>	Legal and regulatory framework reform enables EE measures and actions

		<p>framework concerning energy performance of buildings</p> <p>2.1.4 Status of preparation of a building stock inventory</p> <p>2.1.5 Status of development of a quality control mechanism to monitor energy efficient building codes and building performance compliance certificates</p> <p>2.1.6 Status of development of a new regulatory framework concerning energy management of large energy consumers</p> <p>2.1.7 Status of preparation of a high energy consumers' inventory</p> <p>2.1.8 Status of implementation of a monitoring and verification scheme</p>	<p>buildings not developed or adopted in 2021</p> <p>2.1.4 Building stock inventory not created in 2021</p> <p>2.1.5 Quality control mechanisms not created in 2021</p> <p>2.1.6 Regulatory framework concerning energy management of high energy consumers not developed or adopted in 2021</p> <p>2.1.7 High energy consumers' inventory not created in 2021</p> <p>2.1.8 Monitoring and verification scheme for the obligations of high energy consumers not implemented in 2021</p> <p>2.1.9 New regulatory framework concerning professional qualifications and certification in energy management not developed or adopted in 2021</p>	<p>buildings developed and adopted in 2024</p> <p>2.1.4 Building stock inventory created in 2024</p> <p>2.1.5 Quality control mechanisms created in 2024</p> <p>2.1.6 Regulatory framework concerning energy management of high energy consumers developed and adopted in 2024</p> <p>2.1.7 High energy consumers' inventory created in 2024</p> <p>2.1.8 Monitoring and verification scheme for the obligations of the high energy consumers implemented in 2024</p> <p>2.1.9 New regulatory framework concerning professional qualifications and certification in</p>	<p>2.1.4 Annual Project Progress Report</p> <p>2.1.5 Annual Project Progress Report</p> <p>2.1.6 Annual Project Progress Report</p> <p>2.1.7 Annual Project Progress Report</p> <p>2.1.8 Annual Project Progress Report</p> <p>2.1.9 Annual Project Progress Report</p> <p>2.1.10 Annual Project Progress Report</p>	
--	--	---	--	---	--	--

		<p>for the obligations of high energy consumers</p> <p>2.1.9 Status of development of a new regulatory framework concerning professional qualifications and certification in energy management</p> <p>2.1.10 Status of preparation for exams for certification in energy management</p>	<p>2.1.10 Exams for certification in energy management not carried out in 2021</p>	<p>energy management developed and adopted in 2024</p> <p>2.1.10 Exams for certification in energy management carried out in 2024</p>		
Output 2 relating to Outcome 2	Enhanced awareness and capacity to implement energy efficiency measures in public and private sector	<p>2.2.1 Status of an awareness raising campaign for industrial company managers</p> <p>2.2.2 Number of awareness raising campaign for national manufacturers, importers, distributors and retailers of energy consuming appliances organised</p> <p>2.2.3 Number of awareness raising campaign for the</p>	<p>2.2.1 Awareness raising campaign for industrial company managers not organised in 2021</p> <p>2.2.2 Awareness raising campaign for national manufacturers, importers, distributors and retailers of energy consuming appliances not organised in 2021</p> <p>2.2.3 Baseline: 0 in 2021</p>	<p>2.2.1 Awareness raising campaign for industrial company managers organised in 2024</p> <p>2.2.2 Awareness raising campaign for national manufacturers, importers, distributors and retailers of energy consuming appliances organised in 2024</p> <p>2.2.3 6 by 2026</p>	<p>2.2.1 Annual Project Progress Report</p> <p>2.2.2 Annual Project Progress Report</p> <p>2.2.3 Annual Project Progress Report</p>	<p>Raising the awareness concerning EE measures and opportunities create a conducive environment for the development of EE market</p>

		management of building construction companies, public officials, schools, and general public				
		2.2.4 Number of architects who received capacity building activities for bioclimatic design (disaggregated by sex)	2.2.4 Baseline: 0 in 2021	2.2.4 To be determined in 2024	2.2.4 Annual Project Progress Report	
		2.2.5 Number of energy specialists willing to become certifiers of building energy performance who received capacity building activities	2.2.5 Baseline: 0 in 2021	2.2.5 To be determined in 2024	2.2.5 Annual Project Progress Report	
		2.2.6 Number of energy specialists willing to become Energy Managers who received capacity building activities	2.2.6 Baseline: 0 in 2021	2.2.6 To be determined in 2024	2.2.6 Annual Project Progress Report	
		2.2.7 Status of a reliable and web-based system of energy data	2.2.7 Web-based system of energy data collection and analysis not implemented in 2021	2.2.7 Web-based system of energy data collection and analysis implemented in 2024	2.2.7 Annual Project Progress Report	

		collection and analysis 2.2.8 Status of provision of TA and studies aimed at facilitating investments for transmission and distribution loss reduction	2.2.8 TA and studies aimed at facilitating investments for transmission and distribution losses reduction not implemented in 2021	2.2.8 TA and studies aimed at facilitating investments for transmission and distribution losses reduction implemented in 2024	2.2.8 Annual Project Progress Report	
Output 3 relating to Outcome 2	Better implementation of energy audits and energy efficiency projects across the public and private sector	2.3.1 Status of energy audits and retrofitting studies in pilot public building projects 2.3.2 Status of energy audits undertaken in selected high energy consumers' facilities 2.3.3 Status of energy efficiency pilot actions in public and private buildings and in high energy consumers' facilities	2.3.1 Baseline: 0 in 2021 2.3.2 Baseline: 0 in 2021 2.3.3 Baseline: 0 in 2021	2.3.1 Five energy audits and retrofitting studies carried out in 2024 2.3.2 Ten energy audits carried out in 2024 2.3.3 Five pilot actions carried out in 2024	2.3.1 Annual Project Progress Report 2.3.2 Annual Project Progress Report 2.3.3 Annual Project Progress Report	Energy audits and pilot projects provide the EE actors with useful information for the development of the EE market

Output 1 relating to Outcome 3	Increased renewable energy generation capacity from solar and wind	<p>3.1.1 Status of wind measurement potentials in two possible sites for one year</p> <p>3.1.2 Status of preparation of feasibility studies for utility-scale windfarms and on-grid solar plants</p> <p>3.1.3 Status of preparation of technical support for tendering processes and transactional services</p> <p>3.1.4 Status of preparation of provision of upstream Technical Assistance to leverage investments from DFIs and the private sector</p>	<p>3.1.1 Wind measurements in two sites not implemented in 2021</p> <p>3.1.2 Feasibility studies not carried out in 2021</p> <p>3.1.3 No support for tendering processes in 2021</p> <p>3.1.4 No Technical Assistance to leverage investments in 2021</p>	<p>3.1.1 Wind measurements in two sites implemented in 2024</p> <p>3.1.2 Three feasibility studies carried out in 2024</p> <p>3.1.3 Support for tendering processes implemented in 2024</p> <p>3.1.4 Technical Assistance to leverage investments implemented in 2024</p>	<p>3.1.1 Annual Project Progress Report</p> <p>3.1.2 Annual Project Progress Report</p> <p>3.1.3 Annual Project Progress Report</p> <p>3.1.4 Annual Project Progress Report</p>	The participation of the private sector is crucial to sound and sustainable development of the renewable energy sector
Output 2 relating to Outcome 3	Increased rural electrification through off-grid renewable solutions	3.2.1 Status of preparation of feasibility studies for the solar electrification of National Parks and neighbouring villages	<p>3.2.1 No feasibility studies for the solar electrification of National Parks and neighbouring villages carried out in 2021</p> <p>3.2.2 No feasibility studies for the electrification of rural</p>	<p>3.2.1 Feasibility studies for the solar electrification of National Parks and neighbouring villages carried out in 2024</p> <p>3.2.2 Feasibility studies for the</p>	3.2.1 Annual Project Progress Report	<p>Good quality maintenance of solar energy mini-grids is assured in remote areas</p> <p>Borehole pumpowners are willing to invest on solar energy, if the</p>

		<p>3.2.2 Status of preparation of feasibility studies for the electrification of rural tourism accommodations and neighbouring villages</p> <p>3.2.3 Status of development of a National Action Plan to replace diesel with solar PV for borehole pumps</p> <p>3.2.4 Status of preparation of an awareness raising campaign for farmers on replacing diesel by solar PV for borehole pumps</p> <p>3.2.5 Status of preparation of a new regulatory framework (incentives, obligations, standards, etc.) for off-grid applications</p>	<p>tourism accommodations and neighbouring villages carried out in 2021</p> <p>3.2.3 No National Action Plan to replace diesel with solar PV for borehole pumps developed in 2021</p> <p>3.2.4 No awareness raising campaign for farmers on replacing diesel by solar PV for borehole pumps organised in 2021</p> <p>3.2.5 No regulatory framework for off-grid applications developed and adopted in 2021</p>	<p>electrification of rural tourism accommodations and neighbouring villages carried out in 2024</p> <p>3.2.3 National Action Plan for replacing diesel with solar PV for borehole pumps developed in 2024</p> <p>3.2.4 Awareness raising campaign for farmers on replacing diesel by solar PV for borehole pumps organised in 2024</p> <p>3.2.5 Regulatory framework for off-grid applications developed and adopted in 2024</p>	<p>3.2.2 Annual Project Progress Report</p> <p>3.2.3 Annual Project Progress Report</p> <p>3.2.4 Annual Project Progress Report</p> <p>3.2.5 Annual Project Progress Report</p>	<p>appropriate regulatory conditions are met</p>
Output 3 relating to	Increased number of solar energy systems (thermal and PV) in buildings	3.3.1 Status of development of national Strategy and Action Plan for the	3.3.1 No national Strategy and Action Plan for the installation of solar energy systems	3.3.1 National Strategy and Action Plan for the installation of solar	3.3.1 Annual Project Progress Report	Buildings owners and occupants are willing to invest on solar energy, if the

Outcome 3		<p>installation of solar energy systems in buildings</p> <p>3.3.2 Status of development of a new regulatory framework concerning solar energy installation in building</p> <p>3.3.3 Status of preparation of an awareness raising campaign for the general public about solar energy in buildings</p>	<p>developed or adopted in 2021</p> <p>3.3.2 No regulatory framework concerning solar energy installation is developed and adopted in 2021</p> <p>3.3.3 No awareness raising campaign for the general public on solar energy in buildings deployed in 2021</p>	<p>energy systems developed and adopted in 2024</p> <p>3.3.2 Regulatory framework concerning solar energy installation is developed and adopted in 2024</p> <p>3.3.3 Awareness raising campaign for the general public on solar energy in buildings deployed in 2024</p>	<p>3.3.2 Annual Project Progress Report</p> <p>3.3.3 Annual Project Progress Report</p>	<p>appropriate regulatory conditions are met</p>
Output 4 relating to Outcome 3	Strengthened quality requirements for renewable energy systems	<p>3.4.1 Number of renewable energy equipment standards developed and adopted</p> <p>3.4.2 Status of development of a new regulatory framework concerning market control of renewable energy equipment</p> <p>3.4.3 Status of preparation of procedures for the certification of installers of solar</p>	<p>3.4.1 No renewable energy equipment standards developed and adopted in 2021</p> <p>3.4.2 No regulatory framework concerning market control of renewable energy equipment developed or adopted in 2021</p> <p>3.4.3 No procedures for the certification of installers of solar and other renewable energy equipment developed or adopted in 2021</p>	<p>3.4.1 Renewable energy equipment standards developed and adopted in 2024</p> <p>3.4.2 Regulatory framework concerning market control of renewable energy equipment developed and adopted in 2024</p> <p>3.4.3 Procedures for the certification of installers of solar and other renewable energy equipment</p>	<p>3.4.1 Annual Project Progress Report</p> <p>3.4.2 Annual Project Progress Report</p> <p>3.4.3 Annual Project Progress Report</p> <p>3.4.4 Annual Project Progress Report</p>	<p>The quality of solar and other renewable energy installation is crucial to sound and sustainable development of the renewable energy sector</p>

		and other renewable energy equipment	3.4.4 0	developed and adopted in 2024		
		3.4.4 Number of professionals energy installers trained and certified (disaggregated by sex)		3.4.4 to be determined in 2023		

4 IMPLEMENTATION ARRANGEMENTS

4.1 Financing Agreement

In order to implement this action, it is envisaged the European Commission will conclude a financing agreement with the Republic of Botswana

4.2 Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in section 2 will be carried out and the corresponding contracts and agreements implemented, is 60 months from the date of entry into force of the financing agreement.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Financing Decision and the relevant contracts and agreements.

4.3 Implementation Modalities

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures⁷.

4.3.1 Direct Management (Procurement)

One or more technical assistance contracts will be concluded to provide institutional capacity building, support the development of relevant regulatory frameworks, policy advice and expertise exchange, perform feasibility studies, develop awareness raising campaigns, etc.

The procurement will contribute to achieve Specific Objectives 1, 2 and 3 of the action.

4.3.2 EFSD+ operations covered by budgetary guarantees

A part of this action may be implemented through budgetary guarantees under indirect management. The budgetary guarantees would fall within the following priority areas, 1) the expansion of sustainable energy in the energy mix and, 2) digital transformation through the Government's SmartBots Strategy.

During implementation of the programme, TA and studies will be used to mobilise investments from the EU DFIs and the private sector, namely for:

- Support to IPPs (energy generation capacity)
- Enabling energy infrastructure (distribution, connectivity, storage)
- Access to credit for Micro-, Small- and Medium-Sized Enterprises

⁷ www.sanctionsmap.eu. Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

In this way, it is expected to maximise the impact of the EU support, by mobilising a mix of EU financial tools and expertise, to leverage investments from the DFIs and the private sector in the expansion of the renewable energy sector.

This section 4.3.2 is included for information purposes only. A comprehensive action plan covering all EFSD+ budgetary guarantees and the financing decision for the entire annual commitment under the EFSD+ budget line are adopted separately.

4.3.3 Changes from indirect to direct management mode (and vice versa) due to exceptional circumstances (one alternative second option)

Should implementation through direct management not be possible due to circumstances outside of the Commission's control, indirect management with a pillar assessed entity would be sought as an alternative.

A pillar assessed entity will be selected by the Commission's services using the following criteria:

- **Nature of the action:** The entity would have previously undertaken projects that involve capacity building and a transfer of skills and knowledge to public administrations. In addition, it will have a good track record in assisting in the field of energy policy and regulatory reform to support energy efficiency and renewable energy sources.
- **Operational capacity:** The entity would have a positive track record in implementation through indirect management of projects of a similar size and scope and will have sufficient operational capacity to implement the action or components thereof successfully
- **Value-added:** The entity will have experience in project-based cooperation either on country or institutional level and an adequate setup to ensure a transfer of knowledge, processes and frameworks to the Government of Botswana.
- **Transparency and absence of conflict of interest:** The entity and its members must have no conflict of interest in the design and implementation of the action.

4.4 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, subject to the following provisions.

The Commission's authorising officer responsible may extend the geographical eligibility on the basis of urgency or of unavailability of services in the markets of the countries or territories concerned, or in other duly substantiated cases where application of the eligibility rules would make the realisation of this action impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

4.5 Indicative Budget

Indicative Budget Components	EU contribution (amount in EUR)
Implementation modalities – cf. section 4.3	
Objective 1 – Strengthen institutional capacities and regulatory reforms composed of	900 000
• Procurement (direct management) – cf. section 4.3.1	900 000
Objective 2 – Enhance energy efficiency measures and actions composed of	2 200 000
• Procurement (direct management) – cf. section 4.3.1	2 200 000
Objective 3 – Increase renewable energy generation and inclusive energy access using locally available energy sources composed of	2 200 000
• Procurement (direct management) – cf. section 4.3.1	2 200 000
Procurement – total envelope under section 4.3.1	5 300 000
Evaluation – cf. section 5.2	200 000
Audit – cf. section 5.3	
Contingencies	N.A.
Totals	5 500 000

4.6 Organisational Set-Up and Responsibilities

A financing agreement will be signed with the Republic of Botswana. The contractual aspects of the action will be managed by the EU Delegation to Botswana & SADC through direct management on behalf of the Government of Botswana. As signatory of the financing agreement, the Ministry of Finance and Economic Development is the designated counterpart to the EU and responsible for all official communication with the EU.

The Technical Assistance will be managed directly by the EU Delegation in close collaboration with the Government of Botswana. The Ministry of Mineral Resources, Green Technology and Energy Security (MMGE) will be responsible for the day-to-day implementation and supervision of activities carried out by the TA team of experts. The MMGE will be in charge of overall oversight and steering of the activities as well as of sector coordination and monitoring.

A programme-wide Steering Committee (SC) will be formed in order to monitor achievements and take strategic decisions. It will be convened to meet on a semi-annual basis. Participants would include relevant governmental authorities, agencies and bodies, implementing partners, main beneficiaries and the EU. This committee will oversee project implementation and progress, rectify issues hindering project progress and guide executing and implementing agencies.

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission will participate in the above governance structures set up for governing the implementation of the action.

5. PERFORMANCE MEASUREMENT

5.1. 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 semi-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 logframe matrix (for project modality) and the partner's strategy, policy or reform action plan list (for budget support).

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). Indicators shall be disaggregated at least by sex. All monitoring and reporting shall assess how the action is taking into account the human rights based approach and gender equality.

Roles and responsibilities for data collection, analysis and monitoring: The monitoring by the EU, the Ministry of Finance and Economic Development and the Ministry of Energy and Mineral resources will be through government-led sector coordination (Annual Energy Sector Review exercises) and through sector meetings, based on country reports and monitoring and evaluation systems. The management of energy data will be enhanced thanks to the measures foreseen by the capacity building components.

The TA service provider will assist the EU delegation in collecting, analysing and monitoring the data from the MMGE and Global SDG Indicators Database.

Annual report and semi-annual reports will be prepared for results-based monitoring

5.2. Evaluation

Having regard to the importance of the action, a mid-term and/or final evaluation will be carried out for this action or its components via independent consultants contracted by the Commission. If a mid-term evaluation is undertaken, it will be carried out for problem solving and learning purposes. If a final evaluation is undertaken, it will be carried out for accountability and learning purposes at various levels.

Where an evaluation is planned and is to be contracted by the Commission, it shall inform the implementing partner at least three months in advance of the dates envisaged 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 may be shared with partners and other key stakeholders following the best practice of evaluation dissemination. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, apply the necessary adjustments.

Where a financing agreement is planned, the exception from D+3 shall apply for evaluations. In such case, the evaluations should be implemented by way of procurement beyond the operational procurement envisaged in section 4. Evaluation services may be contracted under a framework contract.

All evaluations shall assess to what extent the action is contributing to gender equality and women's empowerment.

Evaluation services may be contracted under a framework contract

5.3. Audit and Verifications

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 audit or verification assignments for one or several contracts or agreements.

6. STRATEGIC COMMUNICATION AND PUBLIC DIPLOMACY

The 2021-2027 programming cycle will adopt a new approach to pooling, programming and deploying strategic communication and public diplomacy resources.

It will remain a contractual obligation for all entities implementing EU-funded external actions to inform the relevant audiences of the Union's support for their work by displaying the EU emblem and a short funding statement as appropriate on all communication materials related to the actions concerned. This obligation will continue to apply equally, regardless of whether the actions concerned are implemented by the Commission, partner countries, service providers, grant beneficiaries or entrusted or delegated entities such as UN agencies, international financial institutions and agencies of EU member states.

However, action documents for specific sector programmes are in principle no longer required to include a provision for communication and visibility actions promoting the programmes concerned. These resources will instead be consolidated in Cooperation Facilities established by support measure action documents, allowing Delegations to plan and execute multiannual strategic communication and public diplomacy actions with sufficient critical mass to be effective on a national scale.

Appendix 1 REPORTING IN OPSYS

An Intervention (also generally called project/programme) is the operational entity associated to a coherent set of activities and results structured in a logical framework aiming at delivering development change or progress. Interventions are the most effective (hence optimal) entities for the operational follow-up by the Commission of its external development operations. As such, Interventions constitute the base unit for managing operational implementations, assessing performance, monitoring, evaluation, internal and external communication, reporting and aggregation.

Primary Interventions are those contracts or groups of contracts bearing reportable results and respecting the following business rule: ‘a given contract can only contribute to one primary intervention and not more than one’. An individual contract that does not produce direct reportable results and cannot be logically grouped with other result reportable contracts is considered a ‘support entities’. The addition of all primary interventions and support entities is equivalent to the full development portfolio of the Institution.

The present Action identifies as

Action level		
<input type="checkbox"/>	Single action	Present action: all contracts in the present action
Group of actions level		
<input type="checkbox"/>	Group of actions	Actions reference (CRIS#/OPSYS#):
Contract level		
<input checked="" type="checkbox"/>	Single Contract 1	Service contract (EUR 5 300 000) for technical assistance
<input checked="" type="checkbox"/>	Single Contract 2	Service contract (EUR 200 000) for evaluation