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**ACTION IS FUNDED BY THE EUROPEAN UNION**

**ANNEX 2**

To the Commission Implementing Decision on the financing of the Annual Action Plan in favour of the Federal Republic of Nigeria for 2023 - Part 2

**Action Document for EU Nigeria Cooperation Programme for Sustainable Energy Sector in Nigeria - Phase 1**

**ANNUAL PLAN**

This document constitutes the annual work programme within the meaning of Article 110(2) of the Financial Regulation, within the meaning of Article 23 of the NDICI-Global Europe Regulation.

## 1 SYNOPSIS

### 1.1 Action Summary Table

<b>1. Title CRIS/OPSYS business reference Basic Act</b>	EU Nigeria Cooperation Programme for Sustainable Energy Sector - Phase1 (NCProSES) OPSYS number: ACT-61659 Financed under the Neighbourhood, Development and International Cooperation Instrument (NDICI-Global Europe)
<b>2. Team Europe Initiative</b>	Yes Nigeria Green Economy
<b>3. Zone benefiting from the action</b>	Nigeria
<b>4. Programming document</b>	Nigeria Multi-Annual Indicative Programme of the NDICI 2021-2027
<b>5. Link with relevant MIP(s) objectives / expected results</b>	The proposed Action intends to contribute to MIP Priority Area 1 “Green and Digital Economy”. Specific objective: Expand access to clean, efficient and reliable energy while mitigating environmental pollution and greenhouse gasses. Expected results: <ol style="list-style-type: none"><li>1. Access to clean, efficient and reliable energy is increased through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments</li><li>2. Renewable energy and energy efficiency are promoted through policy and regulatory support</li><li>3. Environmental pollution is reduced through targeted initiatives to promote circular economy and GHG emissions reduction</li></ol>
<b>PRIORITY AREAS AND SECTOR INFORMATION</b>	

<b>6. Priority Area(s), sectors</b>	Priority Area 1 Sectors 231, 232 and 236			
<b>7. Sustainable Development Goals (SDGs)</b>	Main SDG: 7 "Affordable and clean energy" Other significant SDGs: SDG 12 "Responsible consumption and production" SDG 13 "Urgent action to combat climate change and its impacts" SDG 8 "Promote inclusive and sustainable economic growth, employment and decent work for all" SDG9 "Sustainable industrialisation" SDG 10 "reduced inequalities" SDG 5 "Gender equality and women's empowerment"			
<b>8 a) DAC code(s)</b>	DAC code Sector 23111 Energy sector policy for activities related to the SDG7 - 25% 23183 Support for energy demand reduction - 5% 23181 Education/training - 5% 32174 Clean cooking - 5% 23230 Solar energy for centralised grids - 18% 23231 Solar energy for isolated grids and standalone systems - 30% 23220 Hydro-electric power plants - 8% 23642 Electric mobility infrastructures - 2% 25040 Responsible business conduct-2%			
<b>8 b) Main Delivery Channel</b>	11000 - Donor Government 13000 - Third Country Government (Delegated co-operation) 60000 – Private Sector 41100 – UN Entities			
<b>9. Targets</b>	<input type="checkbox"/> Migration <input checked="" type="checkbox"/> Climate <input checked="" 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			
<b>10. Markers (from DAC form)</b>	<b>General policy objective @</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Participation development/good governance	<input checked="" type="checkbox"/>	<input 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"/>
	<b>RIO Convention markers</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11. Internal markers and Tags</b>	<b>Policy objectives</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Digitalisation @	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
	Connectivity @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	digital connectivity energy transport health education and research	YES <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
	Migration @ (methodology for tagging under development)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Reduction of Inequalities @ (methodology for marker and tagging under development)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Covid-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>BUDGET INFORMATION</b>			
<b>12. Amounts concerned</b>	Budget line(s) (article, item): BGUE-B2023-14.020120-C1-INTPA Total estimated cost: EUR 120 900 000 Total amount of EU budget contribution: EUR 37 000 000 This action is co-financed by the German Ministry for Cooperation (BMZ) for the amount of EUR 8 900 000			

	<p>This action is co-financed by the French Government/Agence Française de Développement (AFD) for an amount of EUR 75 000 000<sup>1</sup></p> <p>This action will contribute to the Green Economy TEI. Participating EU MS are DE, DK, FR and NL.</p>
<b>MANAGEMENT AND IMPLEMENTATION</b>	
<b>13. Type of financing</b>	<p><b>Direct management</b> through:</p> <ul style="list-style-type: none"> <li>- Procurement</li> </ul> <p><b>Indirect management</b> with</p> <ul style="list-style-type: none"> <li>- The entity(ies) to be selected in accordance with the criteria stipulated in section 4.4.2.</li> </ul> <p>The contribution to the Regional Blending Platform shall be implemented in indirect management by the entities indicated in the annex to this Action Document, in accordance with the Regional Blending Facility Platform's award procedure.</p>

## 1.2 Summary of the Action

The action aims to support Nigeria's effort in decarbonizing its economy and achieving a transition to net zero by 2060 through increased use of renewable energy sources in the final energy mix, increased adoption of energy efficiency measures and reduction of GHG emissions.

Projects under this action contribute to three expected outputs: (1) Access to clean, efficient and reliable energy through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments, (2) Promotion of renewable energy and energy efficiency through policy and regulatory support, and (3) Reduction of environmental pollution through targeted initiatives to promote circular economy and GHG emissions reduction.

This action builds on previous work in energy sector under the 11th EDF. EU support led to the development of a conducive policy, regulatory and institutional framework for renewable energy and energy efficiency development such as the Nigeria Renewable Energy and Energy Efficiency Policy, Nigeria Mini-grid Regulation, Rural Electrification Strategy and Implementation Plan. EU support has also helped increase electricity access especially in rural communities and public health and education facilities in Nigeria using renewable energy sources, which will stand at 10 MW off-grid renewable energy generation by the end of 2023 providing access to over 400,000 persons.

The proposed action is guided by the geopolitical priorities of the EU as well as Nigeria's Nationally Determined Contribution (NDC), Energy Transition Plan and other national development plans, reflected in the EU-Nigeria Ministerial Declaration of November 2020. It aligns with the European Green Deal priorities on renewable energy, energy efficiency and circular economy. This action will be one of the main avenues of implementation of the Global Gateway objectives in Nigeria, by supporting provision of critical energy infrastructure. It will further strengthen the position of the EU as a key partner in the power sector by supporting the Nigerian Government's efforts towards enhancing access to clean, affordable and renewable energy (SDG 7), sustainable industrialisation (SDG9), for productive uses (SDG 12), hence combating climate change (SDG 13) while boosting rural development, growth of agri-SMEs, private sector investment, and creation of jobs (SDG 8) as well as gender equality and women's empowerment (SDG 5).

Likewise, the action will contribute to the realisation of the EU Gender Action Plan 2021-2025 GAP III, in particular to its thematic area of engagement "Promoting equal participation and leadership" and "Addressing the challenges and harnessing the opportunities offered by the green transition and the digital transformation, climate change and environment".

<sup>1</sup> Blending through sovereign loan to Federal Ministry of Power

## 2 RATIONALE

### 2.1 Context

Nigeria has made significant progress in providing electricity access to its rapidly growing population in the last 20 years, going from an overall access rate of only 27.3% in 1990 to approximately 55% in 2020. Electrification advances have nonetheless failed to keep up with Nigeria's population growth thereby leaving large portion of the population without access, while those with access suffer from highly unreliable supply to electricity.

The country's energy sector has seen significant reform over the last decade towards strengthening the role of private investment in renewable energy, although the nascent market has yet to achieve its full potential.

For on-grid electricity, challenges remain due to inadequate transmission lines causing frequent electricity outages and also inability to evacuate all installed power capacity leaving over 60% of stranded power that could have been on the grid. On the distribution side, given the issues related to distribution companies (DisCos) liquidity and high technical and commercial losses in within the network, electricity supply have been below efficient with frequent outages.

For off-grid, despite appropriate regulation, in particular with regard to mini-grids, other barriers prevent progress, e.g. lack of local currency financing, foreign exchange accessibility barriers, limited number of skilled workforce in the sector etc. Hence, Nigeria's significant renewable energy potential remains untapped.

Grid-connected renewable energy sources and energy efficiency measures can help increase security of supply, while decentralised/off-grid renewable energy can help raise considerably the electrification rate. Improving adoption of energy efficiency measures in buildings, industries and within the power sector will be important to ensure sustainable power supply.

Measures that can trigger and facilitate the development of the sector are essential for Nigeria's sustainable development, economic competitiveness and diversification away from fossil fuels, also with a view to tackling the climate change mitigation objectives. The EU has been Nigeria's key partner in the sector since 2008 and this action will further strengthen this position.

In addition to the sustainable energy transition, Nigeria is also one of the African countries steering the Circular Economy transition. It is one of the 3 co-founding members of the African Circular Economy Alliance (with Rwanda and South Africa), and has shown interest to further engage with the EU in cooperating on its Circular Economy transition.

### 2.2 Problem Analysis

The action will seek to address the following challenges:

#### Ensuring access to clean energy for a fast-growing population:

Nigeria's electrification rate is currently 55%, leaving about 93 million people without access, while those with access suffer from highly unreliable supply. As a result, petrol and diesel generators remain the only option for many. This also applies to clean cooking with access at about 15% of the population. Access to clean energy will also have to deliver for the needs of a fast growing population projected to increase from 216 million to 400 million by 2050<sup>2</sup>.

It makes it one of the countries with the largest electricity deficit, and will require a greater effort to meet the 100% electrification target by 2030. Nigeria's use of renewable energy, if increasing, also remains limited. In spite of its abundant renewable resources (solar, hydro, wind) renewable energy only contributes about 20% of total power available on the grid, while the remaining power is dominated by over 80% of gas-fired turbines.

In order for Nigeria to achieve a greener economy and a transition to net zero by 20260 and inclusive socio-economic development, further concerted efforts are needed. The energy sector regulatory environment (especially for off-grid) has seen significant improvements, not least thanks to the EU-funded Nigeria Energy Support Programme (NESP). These favourable conditions now need to be translated into concrete investments in projects and companies operating in Nigeria's green energy market. The action will help boost such private investments,

<sup>2</sup> [World Population Dashboard -Nigeria | United Nations Population Fund \(unfpa.org\)](https://worldpopulationdashboard.org/)

including by assisting in access to finance, technological/digital solutions, capacity building and vocational training/skills for the market.

The intended increased use of renewable energy and improved energy efficiency of on-grid and off-grid supply will reduce CO<sub>2</sub> emission associated with energy generation and use from fossil fuels. Also the use of LPG for cooking will reduce pressures on forests and vegetation cover.

#### Addressing the problem of increasing waste from the renewable energy sector:

Following recommendations from the circular economy study commissioned by DG environment in 2020, plastics was identified as key as a priority subsector in the promotion of circular economy in Nigeria. Plastics and e-waste generation per capita in Nigeria is on the rise within the energy industry and generally. Nigeria's per capita consumption of plastics has grown by 5% annually over the years from 4.0kg in 2007 to 7.5kg by 2020. This is expected to grow further at 5-7% per year.

Almost all components of renewable energy equipment used in the energy sector are manufactured from plastic especially for battery casing. A recent report conducted in Nigeria power sector placed battery waste generation with the off-grid sector at 500,000 tonnes per annum as an indication of the market expansion. The number of batteries in the market only for the renewable energy sector is expected to reach around 200 million by 2040.

By promoting circular economy principles this action will help reduce waste in a fast growing renewable energy sector.

#### Reducing greenhouse gas emissions with a focus on methane:

Nigeria is a major oil producer and exporter, second of the continent after Angola (2 million barrel per day). Nigeria is also the second largest gas producer in Africa, after Algeria. Natural gas production increased by almost 50% between 2010 and 2020 to 47 billion cubic meter (bcm), although it declined to 45bcm in 2021. This gas is used for electricity production as well as exports. 50% of Nigeria's LNG export is made of associated gas from the oil sector while remaining 50% comes directly from gas field. Due to its very developed oil and gas industry, Nigeria is among the world's top 10 methane emitters with an estimated 6.5 million tons of methane emissions per year. Despite 70% of reduction in gas flaring in the past 15 years, Nigeria still flares 7 bcm of gas associated to oil production in 2020.

Methane is the second most important greenhouse gas contributor to climate change following carbon dioxide with a much greater global warming potential than CO<sub>2</sub>, not to mention a potent local air pollutant and contributor to ozone formation. Due to its short-lived nature, reducing methane emissions could help slow down global warming in the near term. With one third of the global anthropogenic methane emission stemming from the energy sector, 45% of those emissions could be mitigated in a win-win situation for climate, energy security and energy-related trade. On a global scale, reducing methane emissions associated with human activity by 50% over the next 30 years could mitigate global temperature change by 0.2°C by 2050, providing a crucial foundation for global climate change mitigation efforts.

In 2021, Nigeria joined the [Global Methane Pledge](#) and included a specific methane target in its Nationally Determined Contribution calling for a 61% reduction in methane emissions in the oil and gas sector. In November 2022, Nigeria became the first African country to regulate methane emissions from its oil and gas sector. In November 2022, the Nigeria Upstream Petroleum Regulatory Commission released an updated "Guidelines For Management Of Fugitive Methane And Greenhouse Gases Emissions In The Upstream Oil And Gas", which highlights the need to establish the estimated baseline emission to implement the target introduced in Nigeria's NDC revision of 2021.

By identifying and reducing major methane leakages into the atmosphere, the action will contribute to a higher efficiency in selected value chains of the energy, agriculture and waste sector.

Finally, while Nigeria is signatory to several international and regional conventions and treaties that establish its commitment to the human rights of men and women, and to gender equality, gender disparity is apparent in many aspects of life in Nigeria. The country ranks 134 out of 146 countries on the 2022 World Economic Forum's Global Gender Gap Index. Against this background, in line with the objectives set in the Gender action Plan III Country Level Implementation Plan (CLIP) for Nigeria, this intervention will promote economic and social rights of girls and women, address the challenges to their empowerment, and harness the opportunities offered by the green transition .

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

The stakeholders in the **power sector** are diverse, cutting across the public, private, donors/development financing institutions, Non-governmental Organisations (NGOs) and associations, among others. Apart from public sector players (duty bearers), private sector players are becoming more active in Nigeria, especially in the off-grid space as well as in the distribution end of the Nigeria electricity supply industry.

**For the public sector (duty bearers)**, the **Federal Ministry of Power (FMP)** is central to power development in Nigeria, even in the framework of a privatised market. The main goal of the FMP is initiating, formulating, coordinating and implementing broad policies and programmes promoting the development of electricity generation from all sources of energy. In order to facilitate diversification of the nation's energy mix, the Ministry of Power is encouraging the use of renewable energy sources for power generation, especially in rural areas of the country.

The **Nigerian Electricity Regulatory Commission (NERC)** is the main sector regulator, responsible for setting tariffs and licensing. It coordinates with other power sector institutions and should be independent. However, it lacks certain specialised skills.

The **Rural Electrification Agency (REA)** plans electrification of rural communities in Nigeria and manages the Rural Electrification Fund, blending private and public capital to improve access for the poorest.

The **Nigerian Bulk Electricity Trading Plc (NBET)** purchases bulk electric power and related services from Independent Power Producers (IPPs), such as the generation companies privatised in 2013 (GENCOs). Management positions have been vacant since spring 2016, a significant weakness at a critical time, given its role in integrating large scale solar to the grid.

The **Standards Organisation of Nigeria (SON)** is responsible for the adoption of standards and for ensuring the compliance of all electrical appliances, while the **Nigerian Electricity Management Services Agency (NEMSA)** enforces technical standards and regulations, technical inspection, testing and certification of electrical installations.

**Federal Ministry of Industry, Trade and Investment (FMITI):** A government institution responsible for creating an enabling environment to stimulate domestic investment and to attract foreign Direct Investment in all sectors of the economy, making Nigeria a preferred investment destination.

Electricity is a shared responsibility between federal and state governments. The primary role of states is to create an enabling environment for better electricity supply in their distribution zones. They are further responsible for generation, transmission and distribution of electricity to rural off-grid communities and have the authority to allocate land and right of way. Some states are taking a keen interest in improving access and have benefited from capacity building regarding electrification planning but capacities are still low.

The players on the distribution side are the government owned and privately managed **Transmission Company of Nigeria (TCN)**, which houses the System and Market Operator and is one of the weakest links in the overall grid system due to project management and investment capacity constraints, which has however diminished partially due to the involvement of Development Financial Institutions (DFIs) in TCN investments. The **Distribution companies (DISCOs)** are key stakeholders in the electricity supply industry in Nigeria as their day-to-day activity is responsible for the liquidity of the sector.

The action will also work with **local commercial banks** here in Nigeria and **Development Bank of Nigeria** whose mandate is to alleviate financing constraints faced by MSMEs and small Corporates in Nigeria through the provision of financing and partial credit guarantees to eligible financial intermediaries on a market-conforming and fully financially sustainable basis. Other key financing stakeholder will be the **Bank of Industry** whose mandate is to provide financial assistance for the establishment of large, medium and small projects as well as the expansion, diversification and modernisation of existing enterprises; and rehabilitation of existing ones.

For **circular economy** activities, the main stakeholders include:

**Federal Ministry of Environment (FMEnv):** FMEnv is the Governmental executive body with the mission to ensure environmental protection and natural resources conservation for sustainable development in Nigeria, with a view to ensure Nigeria's development in harmony with the environment.

**National Environmental Standards, Regulations and Enforcement Agency (NESERA):** NESERA is the national regulatory body in charge of developing regulations and enforcing them. The action will engage NESERA for developing necessary regulations, including EPR, and ensure coordination with target State's governments and enforcement institutions.

**Target States' Governments and institutions such as Environment Protection Agencies:** The Action will involve work with the environmental regulator of target States, of which responsibility is to safeguard environmental quality that is consistent with the social and economic needs of the State, putting policy into action.

**E-waste Producers Responsibility Organization of Nigeria (EPRON):** Is a producer responsibility organization aimed at the development of a sustainable circular economy for end-of-life electronic products in Nigeria, including the treatment and management of e-waste.

Other PROs are the Food and Beverage Recycling Alliance (FBRA) for food and beverage companies and the Alliance for Responsible Battery Recyclers (ARBR) for renewable energy companies.

And, **private sector associations such as Manufacturers Association of Nigeria (MAN), Waste Management Association of Nigeria (WAMASON).**

Since involvement of private sector and promoting the circular economy principles and practices in industry is the main activities of this Action, private sector associations are important stakeholders. Envisaged activities with them would be consultations, co-organized outreach activities, technical assistance, business development service, and trainings. Other stakeholders could be educational and research institutions to incorporate training and research activities especially on product design and alternatives, into their programmes.

**Civil society organizations and communities (rights holders)** should be involved in the action. Civil society organizations suffer from weak organisational and resources capacities. The intervention will should strengthen them to support the interests of local communities and particularly persons in vulnerable situations. Civil society organizations will be involved in awareness and consultation activities regarding renewable, affordable and healthy energy, including women's organisations, or organisations representing people with disabilities.

Stakeholders for Methane-related activities will include;

**Federal Ministry of Petroleum Resources:** which directs petroleum resources and its activities in Nigeria  
**Federal ministry of environment:** which ensure the control of environmental issues and the protection of natural resources conservation

**Other key stakeholders** of this activity will include;

- Nigeria National Petroleum Company NNPC Limited the only entity licensed to operate in the country's petroleum industry. It partners with foreign oil companies to exploit Nigeria's fossil fuel resources.
- Departments of climate change : To provide a sustainable policy framework and enabling environment for climate change action in Nigeria and to regularly update information regarding national greenhouse gas emission, mitigation options, vulnerability assessment and adaptation measures to the impacts of climate change
- Nigeria's Climate Change Council: is tasked with the responsibility of formulating appropriate policies and other mechanisms for achieving low Green House Gas emissions, including green growth and sustainable economic development for Nigeria.
- Nigerian Upstream Petroleum Regulatory Commission (NUPRC) To ensure sustainable development of Nigeria's Upstream Petroleum Resources through effective regulatory practices, while entrenching world-class professionalism, accountability, and transparency
- International and national oil and gas companies, active in the upstream, midstream and downstream oil and gas sector in Nigeria as well as companies with best practices in methane emission reduction.
- International initiatives and organisations such as the International Methane Emission Observatory, the Oil and Gas Methane Partnership 2.0



### 3 DESCRIPTION OF THE ACTION

#### 3.1 Objectives and Expected Outputs

**The Overall Objective** (Impact) of this action contributes to Nigeria's effort to build a sustainable energy sector.

**The Specific Objective** (Outcome) of this action is to expand access to clean, efficient and reliable energy while mitigating environmental pollution and greenhouse gasses.

**The expected Results (Outputs)** are :

1. Access to clean, efficient and reliable energy is increased through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments
2. Renewable energy and energy efficiency are promoted through policy and regulatory support
3. Environmental pollution is reduced through targeted initiatives to promote circular economy and GHG emissions reduction

This action supports the Nigerian government's effort to build a sustainable, accessible and reliable energy sector. It is a significant part of the Green Economy Team Europe Initiative (TEI), of nearly EUR 1.3 billion, also supported by the EIB, other EU DFIs, Denmark, France and the Netherlands. It is also essential for the EU Global Gateway implementation in Nigeria and will help put the country on a sustainable development path.

#### 3.2 Indicative Activities

- 1. Access to clean, efficient and reliable energy is increased through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments**

##### 1.1. Large scale PV solar power-plant:

This is a blending operation (75 million euros loan from AFD and 2million euros grant from the EU) for the construction of a 200MW solar photovoltaic park in Jigawa Solar park with three components:

- The development of a solar power plant with a capacity of up to 200 MW, via 4 clusters of 50 MW.
- The development of electrical energy storage facilities.
- Transmission and/or distribution network, and the construction of medium or high voltage lines. This component includes the possible upgrading of two substations. The component also includes the construction of Medium Voltage or High Voltage lines, for a 33 kV line and a 132 kV line).

##### 1.2. Small Hydro Power generation for agriculture in Nigeria:

The Action will implement a cumulative 8MW installed SHP capacity across the six (6) geopolitical zones of Nigeria. On average, each site will have an installed capacity ranging from 300kW-2,500KW for SME/MSME in the agricultural sector.

The proposed Action will enhance the use of renewable energy for productive use in Nigeria through Water, Energy and Food nexus approach. This will specifically be achieved by promoting agro-industrial development within river basins in rural and peri-urban areas, propelled by enhanced energy access through small hydro power (SHP) development. The Project will also focus on productive uses/applications for the generated electricity. i.e. electricity generated from the SHP plants will be sold to local industries/SME's. This approach will enable the operator of the SHP plants to generate the necessary income required to maintain continuous operation of the SHP plants.

To ensure sustainability for the project, local technicians from benefiting community/benefiting states will be selected and trained to carry out technical maintenance which these SHP operators can employ as technicians in their sites thereby domesticating the technology in the benefiting states. Also, SHP plants have a long life span (over 25 years) and usually have low/minimal O & M requirements. As the selection of suitable SHP equipment

is site specific (i.e. based on the local flow and head characteristics at each site), operation and maintenance (O&M) personnel will be trained to carry out routine and non-routine maintenance, tailored to the specific site.

The UNIDO regional centre in Nigeria, from their previous work on SHP in Nigeria, has transferred the technology for the fabrication of cross-flow turbines up to 125kW to National Agency for Science and Engineering Infrastructure (NASENI). Where applicable, locally manufactured turbines will be considered for installation. This will aid in removing technology barriers in terms of constraints in importation and related costs and will help in reducing the level of dependency on imports to a certain degree. However, in other instances where the use of locally manufactured turbines is not feasible, equipment will be procured from suitable foreign technology providers with proven track record in manufacturing SHP turbines and control equipment.

EU DFIs will be actively engaged to provide financing to private sector involved in agro-processing for replacement of inefficient equipment.

### 1.3. Solar for Health:

The proposed project is aimed at providing 24hours electricity supply to critical public facilities (e.g. health and education and street lighting) that are off the grid or underserved. The intervention will target some 45 state owned public healthcare facilities using solar micro-grids. Targeted states will be those under other sustainable energy, climate-smart agriculture and health programmes. Following recommendations from the final evaluation of Solar Nigeria3 funded under the 11<sup>th</sup> EDF to split equipment procurement and project management into two separate contracts for better project implementation, this project will also be supported by a technical assistance which will act as the owners engineer responsible for systems design and validation, sites selection, project management, supervision of actual installation by EPC, load demand assessment and stakeholders engagement.

This project will improve electricity supply to public health care facilities, reduce CO2 emissions from diesel and petrol generators and improve access for productive load users and houses around the base load (public health care facility) that will buy excess power remaining from the solar micro grid. EU funds will be used for the management of the project and procurement of generating assets while the distribution assets will be funded by the benefiting states and a possible financing from EFSD+. A Build, own, operate and transfer (BOOT) agreement will be signed with EPC contractor for 10years.

### 1.4. GET. Invest Nigeria Country Window:

The GET.invest Country Window Nigeria will provide much needed support to private sector in mobilising investments from the private sector and also accessing European financing instruments under the Global Gateway initiative. The project will thereby significantly accelerate the development of renewable energy projects in Nigeria, facilitate the successful deployment of European Union financial instruments (such as in particular the EFSD+ instruments) and contribute to economic development and job creation across a variety of sectors, including the energy sector.

The project builds on the successes of the EU-funded Nigeria Energy Support Programme (NESP) Phases I & II and will complement their planned activities under NESP Phase III through targeted private sector advisory and support, assessing project ideas, hands-on coaching and referring projects and companies to relevant sources of funding and facilities, depending on the intended technology, business model and project size.

## **2. Renewable energy and energy efficiency are promoted through policy and regulatory support**

### 2.1 Nigeria Energy Support Programme (NESP) III:

Engagement with public and private entities, public or industry led (self) regulatory bodies and business organisations in the sector will be continued to achieve better implementation of sector policies, regulations and standards. Such engagement will build on previous work under NESP and take place at federal or state level and include women associations. It will also promote the development of new policies, regulations and standards where necessary.

The project will scale up its activities on promoting energy efficiency in the industry and building sector with possible financing for energy efficiency measures.

NESP III seeks to expand the capacity and knowledge transfer required in Nigeria to engrave ownership with the Nigerian partners and private sector for permanent impact. Finally, NESP III will mainstream the business models like the PREMIUM GRID concept for on-grid renewable energy at the medium voltage level targeting peri-urban, urban and industrial clusters areas to meet the RE & EE targets of the Nigerian ETP. It will also continue its work on off-grid electrification focusing on result-based financing for mini-grids, e-mobility, LPG for household and commercial cooking, targeting approximately 100MW from On-Grid and 6MW from off-grid solutions.

NESP III will retain the components currently existing in NESP2 which are ; (i) electrification planning, (ii) sustainable energy access (on and off-grid) and (iii) energy efficiency with (policy, training and capacity building) cutting across all the three components.

### **3. Environmental pollution is reduced through targeted initiatives to promote circular economy and GHG emissions reduction**

#### **3.1. Promoting Circularity of Plastic value chains in Nigeria:**

This activity will focus on recycling and promoting the reuse of plastic waste generated from damaged plastic components of renewable energy equipment. This is categorized into both soft and hard components; Soft component (Studies, trainings support to SMEs for the development of CE business models, Study tours, support to strengthen implementation of policies and regulations already available in the country ) and Hard component (infrastructures i.e actual recycling equipment) . It responds to both the request of the Government, for the development and testing of circular economy models in the plastic value chain and, the recommendations from the circular economy study commissioned by DG Environment in 2020. This study identified plastics recycling as one of the Circular Economy subsector with most potential in Nigeria. It also identified that Circular Economy measures and investments in a range of sectors could increase Nigeria's GDP by 3.2% and create 1.6 million additional jobs by 2030.

The project will also focus on casings of lead acid and lithium-ion backup batteries at their end life in the Nigeria energy sector and other value chains. It will support the recommendations and targets set in Nigeria's battery waste management policy. Apart from the soft component of the project, equipment for recycling will be procured with partial funding coming from credit lines to be provided by development financing institutions either by IFC or other European DFIs.

#### **3.2. A Methane emission reduction programme in Nigeria:**

This activity will provide technical support to Nigeria in addressing methane leaks by strengthening the regulatory and policy framework, develop capacity building and transfer of knowledge towards public and private sector stakeholders. This will involve baselining studies for the oil and gas, agriculture and waste sector for identifying low hanging action to reduce methane emissions. Data collection will be done in partnership with the International Methane Emission Observatory in Nigeria. Efforts targeted at on-boarding oil and gas companies in Nigeria to the Oil and Gas Methane Partnership 2.0 for monitoring, reporting and verifying methane emissions will be considered.,

Team Europe Initiative to which this action refers, will be complemented by other contributions from Team Europe members. It is subject to the formal confirmation of each respective member's meaningful contribution as early as possible. In the event that the TEIs and/or these contributions do not materialise, the EU action may continue outside a TEI framework.

### **3.3 Mainstreaming**

#### **Environmental Protection & Climate Change**

With its focus on clean/green energy and circular economy, the action is expected to deliver positive environmental and climate change benefits because it aims to increase the use of renewable energy across Nigeria and improve energy and resource efficiency, thus reducing carbon emissions, air pollution and dependence on fossil fuels. The action is also expected to promote a more efficient use of LPG for cooking, currently a major source of thermal energy

needs at household level (cooking, heating) and reduce the environmental and health hazards associated with indoor air pollution. Thus, the action will contribute to mitigating i.e. reducing or avoiding present or future greenhouse gases emissions. This is achieved by substituting current or future fossil fuel use (e.g. in diesel generators or thermal power plants), avoiding energy consumption with fossil fuel components in energy efficiency investments, or by avoiding unsustainable use of biomass. In addition, some climate change adaptation impacts can be expected as, in general, a decentralised energy system is less exposed to natural disasters or other risks arising from weather extremes (e.g. increased soil erosion in excessive rainfall situations, leading to hydropower dam siltation and thus reduced power generation). Mini-grids, in addition to strengthening the overall system resilience by way of being isolated from risk-exposed main grids, enable localised value addition, like food processing and storage, thus contributing to more resilient food supply and economic activity. On the other hand, standalone systems include productive use systems with similar benefits to mini-grids (solar mills, fridges, etc.), and support solar water pumping which enables tailored irrigation solutions for individual farms. Finally, clean cooking solutions are an essential factor to tackle deforestation, which is of critical importance given the link between forests, soil erosion and water supply. Methane is a powerful trigger of ozone and a powerful greenhouse gas. The action will contribute to Nigeria's effort to reduce methane emission and gas flaring with direct benefit to the climate and to air quality. At the level of specific interventions, environmental impact assessment and climate risk assessment will be conducted as needed, based on the results of national, EU and/or implementing partner screening procedures.

#### **Outcomes of the EIA (Environmental Impact Assessment) screening**

The EIA (Environment Impact Assessment) screening classified the action as Category B (not requiring an EIA, but for which environment aspects will be addressed during design)]. One of the activities under this action which seeks to support the development of an on-grid solar park will carry out an environmental impact and social assessment as part of the soft component of the project to be funded under a blending operation.

**Outcome of the CRA (Climate Risk Assessment) screening** The Climate Risk Assessment (CRA) screening concluded that this action is of no or low risk which implies no need for further assessment. The rationale behind this is that the proposed action will not pose risks in the context of climate change or biodiversity. Rather, this action will mitigate climate change by reducing CO2 emissions.

#### **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 it does include gender equality and empowerment of women and girls as a significant objective of the action (featuring a respective indicator at this level). The action inherently addresses gender equality through its support to decentralised business models that empower local stakeholders, both entrepreneurs as well as end-users, incl. women and youth, through access to energy and digital solutions, among others. The action will engage women throughout the sector and in decision-making roles from which they have traditionally been excluded. The action will follow the Nigerian National Action Plan on Gender and Climate Change 2020.

#### **Human Rights**

In general terms, the action will contribute to addressing the energy access gap, considered derived human right, Addressing energy poverty will help remove a significant socio-economic barrier that prevents many Nigeria, esp. in rural areas, from enjoying their formal rights.

#### **Disability**

This action will not directly target persons with disabilities as the action is labelled as D0. However, access to affordable energy has an important impact on persons with disabilities as they tend to have higher energy needs. Since persons with mobility difficulties tend to spend more time at home, their energy bills are higher than for households without persons with disabilities and often they have fewer financial resources available to pay their energy bills. The key to overcoming the energy challenges faced by people with disabilities lies mainly in increasing access to affordable electricity, which is one of the objectives of this project.

#### **Democracy**

By ensuring that energy services reach the most marginalised people, in a more inclusive and sustainable way, this action will enhance equal opportunities among targeted population and will contribute to reinforcing people's trust in the institutions and democratic governance.

#### **Conflict sensitivity, peace and resilience**

N/A

### **Reduction of inequalities**

On the grid, there is high energy access inequality in Nigeria. In 2020, the national electricity regulator divided Electric customer into 5 tariff service bands and now revises the tariff payable by customers based on the quality of service. This is measured by the average availability of power delivered over a one-month period; factoring the frequency and duration of interruptions and other parameters. The service bands are categorized into Band A, B, C, D and E.

This automatically created inequality in terms of energy supply to the grid.

Off the grid, the rural communities experience deep energy inequality in Nigeria too. Only 13% of Nigerians have access to clean cooking energy. UNICEF revealed that Nigeria has the highest number of overall air pollution-related pneumonia deaths of children under-five in the world. One of the important ways this can be addressed is to increase the proportion of Nigerian households with access to clean cooking fuels and technologies, by increasing the use of LPG gas for cooking. This action will continue to promote business models already developed to facilitate private sector financing and distribution of LPG for both household and productive use.

### **Disaster Risk Reduction**

The action does not specifically target disaster risk reduction. However, many of the projects under the action will indirectly support disaster resilience. Generally, by contributing to diversified and robust energy markets, the resilience to natural disasters is enhanced. By increasing the use of renewable energy as opposed to fossil fuels, CO2 emissions are reduced, hence also reducing the greenhouse effects for the planet, which are the cause of extreme weather events.

The activity on circular economy will indirectly contribute to disaster reduction as it relates to urban flooding arising from blocked drains by plastic materials dumped in them due to failed solid waste management systems in cities. Reducing plastic pollution from the environment as a result of this action would contribute to reducing flooding risks.

### **Other considerations if relevant**

#### Digitalisation

With regards to expected target groups, many of the energy access companies and projects are based on digital service delivery models. In fact, the energy sector has already been, for example in terms of mobile payment for energy services, mobile and remote maintenance, as well as smart metering, at the forefront of digital innovation. In addition, the action will be linked with an innovative digital and open source energy use data platform.

## **3.4 Risks and Lessons Learnt**

<b>Category</b>	<b>Risks</b>	<b>Likelihood (High/ Medium/ Low)</b>	<b>Impact (High/ Medium/ Low)</b>	<b>Mitigating measures</b>
External environment	External risks and uncertainties (e.g. pandemic and war crisis)	Medium	High	The action will retain the inherent flexibility to adapt to changing circumstances.
legality and regularity aspects	Enabling environment barriers such as lack of conducive policies, complex licencing and permitting landscape, no cost-reflective tariffs,	Low	Low	These will be mitigated through the implementation of the Nigerian Energy Support Programme (NESP), which is directly addressing these issues. NESP has in fact already made significant progress over the last 8 years in developing a robust regulatory framework in Nigeria that is widely recognised as one of the best in Western Africa.

	lack of technical standards etc.			
External environment	Federal and State institutions (e.g. FMP, NERC, etc.) lack commitment to the development of RE and EE	Low	Medium	Intensified policy dialogue
External environment	Security challenges and localised conflicts.	Medium	High	Locations will be chosen after consideration of the potential unrest  Flexible implementation approach
People and the organisation	Possibility of corruption in the process of procurement	Low	Low	All procurement are handled by the implementing partners which are member state implementing agencies and have been pillar assessed. A human rights base approach will be applied respecting the participation, non-discrimination, transparency and accountability principles

#### **Lessons Learnt:**

From previous actions, there is a strong need for political and technical ownership of the project on the side of the public stakeholders or right-holder at all levels of government to ensure both success and sustainability of the intervention.

However, there is a need to strike a balance between local ownership and programme progress, which can be done by engaging beneficiaries early in programme development. Ownership has an important role to play in maintenance and adequate technical assistance needs to be provided to ensure ownership.

Reform plans in the energy sector are usually implemented with considerable delays, often only partly and sometimes not at all, partially due to lack of implementation capacities, lack of coordination and lack of proper data. However, experience shows that professional capacity of the respective and relevant parts of the administration can be enhanced in order to improve the planning process and – with some trickle-down effect – its implementation.

Finally, procurement and import of goods to Nigeria has shown to be a potential delaying factor and has to be planned for carefully. Some remedies are further operationalising the institutions involved and careful attention to the implementation of duty waivers.

In addition, drawing specifically from past projects:

#### **NESP1**

This project has built a strong partnership between the EU and the government administration over time, placing the EU as one of the key government partners in the sector. The project's next phase will build on the trust established with the local stakeholders and the expectations of sustained support to advance in sustainable energy efforts. This is particularly important due to the EU role in promoting renewable energy and other climate change mitigating measures, especially in a country that is a major oil and gas producer and exporter. Experiences from NESP I implementation have shown that there is still an unclear set-up of institutions in the power sector. Mandates of institutions are not fully established and lead to overlaps/gaps in the governance of power issues. Additionally, the project experience so far has brought to light the low technical and managerial capacity of private companies, especially small and medium sized enterprises (SMEs). This is why activities directly supporting the private sector are essential for the sector development.

#### **Solar Nigeria3**

The adoption of public private partnerships (PPP) solutions was identified as an innovative way to support proper operation and maintenance of the electricity generation units as against the former model of putting O&M in the hands

of the benefiting states. Also to avoid multiple layers of implementation, as in the case of DFID (implementing partner at the time), a split of equipment procurement and project management into two separate contracts for better project implementation was recommended.

### 3.5 The Intervention Logic

**The underlying intervention logic** for this action is that the EU intervention relies on both "soft" and "hard" actions. The soft actions are aimed at creating a favourable regulatory and business environment for the development of the sustainable energy sector in Nigeria. This will also include actions that provide opportunities for the EU to engage with the private sector and in a high level policy dialogue with key Nigerian decision-makers, capitalizing on the weight of its cooperation programme and donor coordination role. Hard actions will mainly focus on energy infrastructure cutting across on- and off-grid energy access.

**The Action is premised on this underlying intervention logic :**

**IF** efforts are concentrated on improving the broader renewable energy/energy efficiency policy and regulatory ecosystem,

**IF** efforts deliver on more private sector led energy investments that materialise through grants, blended finance, guarantees, debt financing

**IF** efforts are geared towards the promotion of reuse and recycling of plastic waste generated in the energy and other sector of the economy and, towards reduction of methane emissions and gas flaring in the oil and gas sector, through engagement of both public and private sector stakeholders,

**AND** assuming that the government remains committed to the net zero objective by 2060, its NDC target on gas flaring and fugitive methane emissions and making RE & EE an integral part of the energy mix, **security** situation allows for the implementation of activities in the selected states, private and public sector funds are available to finance large scale RE projects, effective governance and programme monitoring exist,

**THEN** increased renewable energy capacity will be installed from options like Small Hydro Power and solar sources, thereby providing increased electricity access to underserved and unconnected population **AND** the environmental pollution and emissions of greenhouse gases in the energy sector will be reduced

**IF** all outputs are achieved, **THEN** the Specific Objective to expand access to clean, efficient and reliable energy while mitigating environmental pollution and greenhouse gasses is achieved.

### 3.6 Logical Framework Matrix

This indicative logframe constitutes the basis for the monitoring, reporting and evaluation of the intervention.

On the basis of this logframe matrix, a more detailed logframe (or several) may be developed at contracting stage. In case baselines and targets are not available for the action, they should be informed for each indicator at signature of the contract(s) linked to this AD, or in the first progress report at the latest. New columns may be added to set intermediary targets (milestones) for the Output and Outcome indicators whenever it is relevant.

- At inception, the first progress report should include the complete logframe (e.g. including baselines/targets).
- Progress reports should provide an updated logframe with current values for each indicator.
- The final report should enclose the logframe with baseline and final values for each indicator.

The indicative logical framework matrix may evolve during the lifetime of the action depending on the different implementation modalities of this action.

The activities, the expected Outputs and related indicators, targets and baselines included in the logframe matrix may be updated during the implementation of the action, no amendment being required to the Financing Decision.



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
<b>Impact</b>	To contribute to Nigeria's effort to build a sustainable energy sector	<p>1. Total New Renewable energy capacity installed with EU support</p> <p>1.2 Greenhouse Gas (GHG) emissions avoided (tonnes CO2eq) with EU support</p>	<p>1.1 0 new renewable energy capacity installed by (2022)</p> <p>1.2 0 tonnes of GHG emission avoided by 2022</p>	<p>1. 400 MWp of new renewable energy capacity installed by (2027).</p> <p>1.2 (498,549.12 tonnes of CO2 and 10 Million tons of CH4 avoided by 2027</p>	<p>1. Nigeria Central Data Management Platform for the power sector</p> <p>1. Nigeria's MRV system for the energy sector</p>	<i>Not applicable</i>
<b>Outcome 1</b>	To expand access to clean, efficient and reliable energy while mitigating environmental pollution and greenhouse gases	<p>1.1 Number of people with access to electricity with EU support through new connections</p> <p>1.2 Renewable energy generation capacity installed (MW) with EU support</p> <p>1.3 Amount of Methane emissions avoided (tonnes CH4) with EU support</p> <p>1.4 Kilograms of plastic waste recycled with EU support</p>	<p>1.1 0 person by 2022</p> <p>1.2 0 MW of renewable energy generated by 2022</p> <p>1.3 0 CH4 avoided across the 3 sectors (oil and gas, waste and agriculture) by 2022</p> <p>1.4 0 kilograms of waste plastics by 2022</p>	<p>1.1. 500,000 persons by 2027 (at least 250 000 are women)</p> <p>1.2. 400 MWp of renewable energy by 2027</p> <p>1.3. 10 Million tons of CH4 abated across the 3 sectors (oil and gas, waste and agriculture) by 2027</p> <p>1.4. 500,000 tons of plastic waste recycled annually by 2027</p>	<p>1.1 Nigeria Central Data Management Platform for the power sector</p> <p>1.2 Annual UN Tracking SDG7 Energy Progress Report</p> <p>1.3 Oil and Gas Methane Partnership 2.0 (OGMP 2.0)</p> <p>1.4 Progress Report</p>	The Federal Government of Nigeria and State institutions (FMPWH, NERC, etc.) remain committed to the promotion of RE, EE and rural electrification. Also that the Federal Government of through the ministry of petroleum and ministry of environment remain committed to methane reduction and circular economy

<b>Output 1 relating to Outcome1</b>	1.1 Access to clean, efficient and reliable energy is increased through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments	<p>1.1.1 Number of people with access to power supply off-grid and on-grid with support of the EU-funded intervention disaggregated by sex and age</p> <p>1.1.2 Number of connections with access to power supply off-grid and on-grid with support of the EU-funded intervention</p> <p>1.1.3. Percentage of Renewable Energy share in the energy mix achieved with support of the EU-funded intervention</p> <p>1.1.4 Number of benefitting social infrastructure health, education, lighting) served by solar micro-grids *</p> <p>1.1.5 Number of clean energy investment and energy access projects/companies supported by the EU-funded intervention that reached financial close.</p>	<p>1.1.1 0 (2022)</p> <p>1.1.2 0 (2022)</p> <p>1.1.3 0% (2022)</p> <p>1.1.4 0 (2022)</p> <p>1.1.5 numbers of companies supported (2022)</p> <p>1.1.6 0 Euros investment by (2022)</p> <p>1.1.7 0% of companies led by women supported by (2022)</p>	<p>1.1.1 500,000 persons (2027) at least 250 000 are women</p> <p>1.1.2 30,000 connections(Both households and SMEs) (2027)</p> <p>1.1.3 10% 2027</p> <p>1.1.4 45solar Micro Grid</p> <p>1.1.5 50 clean energy projects/deals financed (2027)</p> <p>1.1.6 500 Million euros worth energy investment (2027)</p> <p>1.1.7 5% of companies led by women supported by (2027)</p>	<p>Progress reports for the EU-funded intervention;</p> <p>Baseline and endline surveys conducted and budgeted by the EU-funded intervention;</p> <p>Database of beneficiaries/participants;</p> <p>Pre- and post-training test reports;</p> <p>Reports from the subcontractors, infrastructure/equipment handover and inspection documents</p>	The Federal Government of Nigeria and State institutions (FMPWH, NERC, etc.) remain committed to the promotion of RE, EE and rural electrification.

		<p>1.1.6 Amount in EUROS in investment volume worth of the total number of clean energy investment and energy access projects/companies supported by the EU-funded intervention that reached financial close.</p> <p>1.1.7 % of projects/companies led by women supported by the EU-funded intervention that reached financial close.</p>				
<b>Output 2 relating to Outcome1</b>	1.2 Renewable energy and energy efficiency are promoted through policy and regulatory support	<p>1.2.1 Number of policies , standards, and regulations developed or revised with support of the EU-funded intervention:</p> <p>1.2.2. Number of energy efficiency measures implemented in key sectors by the EU-funded</p> <p>1.2.3. number of MW on and off-grid renewable energy electrification projects</p>	<p>1.2.1. 1 policy, 6 regulations, 39 standards developed (2022)</p> <p>1.2.2 21 energy efficiency measures implemented (2022)</p> <p>1.2.3 0 MW of renewable energy projects by (2022)</p>	<p>1.2.1 To be decided in the inception phase by 2027</p> <p>1.2.2 50 energy efficiency measures implemented by 2027</p> <p>1.2.3 10MW On-Grid and 6MW off-grid renewable energy projects installed by 2027</p>	<p>Progress reports for the EU-funded intervention;</p> <p>Database of beneficiaries/participants;</p> <p>Pre- and post-training test reports;</p> <p>Text of laws and regulations;</p> <p>Text of strategies and policy documents;</p>	<p>The Federal Government of Nigeria and State institutions (FMPWH, NERC, etc.) remain committed to the promotion of RE, EE and rural electrification, Committed to adopting and enforcing the policies, regulations and</p>

		facilitated or financed by the EU-funded				standards developed
<b>Output 3 relating to Outcome1</b>	1.3 Environmental pollution is reduced through targeted initiatives to promote circular economy and GHG emissions reduction	<p>1.3.1 - Number of SME plastic/e-waste recycling plants developed with EU support</p> <p>1.3.2 Number of companies trained and adopting circular economy practices with EU support</p> <p>1.3.3. Tons of plastics collected and recycled and equivalent CO2 reduction with EU support</p> <p>1.3.4 Number of people trained and employed in the plastic/ e-waste value-chain with EU support</p> <p>1.3.5 – Number of companies operating in Nigeria adopting international standards such as OGMP2.0 for Monitoring with EU support</p> <p>1.3.6 Number of methane emission reductions strategy, policy, regulations developed for the oil and gas, agriculture and waste sector with EU support</p> <p>1.3.7 Baseline on methane emission in oil and gas,</p>	<p>1.3.1. zero Number of SME plastic recycling plants by (2022)</p> <p>1.3.2 zero Number of companies adopting CE practices by (2022)</p> <p>1.3.3 zero Tons of plastics collected by (2022)</p> <p>1.3.4 zero Number of people trained and employed by (2022)</p> <p>1.3.5 5 companies in the Oil and Gas Methane Partnership 2.0 by (2022)</p> <p>1.3.6 zero number of strategy, policy, regulation by (2022)</p> <p>1.3.7 zero Baseline on methane emission in oil and gas, agriculture and waste sector established with EU support by 2022</p>	<p>1.3.1. Six SMEs(6) by 2027</p> <p>1.3.2. 100 by (2027)</p> <p>1.3.3. TBD by (2027)</p> <p>1.3.4. 1500 (2027)</p> <p>1.3.5 20 oil and gas companies including local and international companies operating in Nigeria by 2027</p> <p>1.3.6 3 strategy, policy, regulation by (2022)</p> <p>1.3.7 3 Baseline(one for each targeted sector) on methane emission in oil and gas, agriculture and waste sector established with EU support by 2022</p>	<p>Progress reports for the EU-funded intervention;</p> <p>Baseline and endline surveys conducted and budgeted by the EU-funded intervention;</p> <p>Database of beneficiaries/participants Pre- and post-training tests reports)</p>	<p>The Federal Government of through the ministry of petroleum and ministry of environment remain committed to methane reduction and circular economy</p>

		agriculture and waste sector established with EU support				
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## 4 IMPLEMENTATION ARRANGEMENTS

### 4.1 Financing Agreement

In order to implement this action, it is envisaged to conclude a financing agreement with the partner country.

### 4.2 Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in section 3 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 adoption by the Commission of this Financing Decision.

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 of the Budget Support Component [For Budget Support only]

N/A

### 4.4 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 measures<sup>3</sup>.

#### 4.4.1 Direct Management (Procurement)

Procurement will provide for technical assistance (TA) for project management, supervision, etc. for the installation of solar micro grids across several public health facilities in Nigeria. Other tasks will include: site assessments and selection, load demand assessment, systems design, finalize the number of sites to be procured etc. The TA will also be responsible for stakeholders engagement with benefiting states, monitor the actual installation of the systems.

The procurement process for the Solar for Health TA will be launched in the second quarter of 2023, possibly under a suspensive clause 11.b, i.e. before a financing decision and a subsequent agreement between the European Commission and the partner country will have been signed. This would be justified to allow enough time for the selection of the Technical Assistance Team for coordination support of the works which would follow.

#### 4.4.2 Indirect Management with an entrusted entity

A part of this action may be implemented in indirect management with GIZ, AFD, UNIDO, UNEP or World Bank.

One contribution agreement with **GIZ** for the implementation of the following projects in two output areas:

- **In output area 2:** EU-German flagship technical assistance programme, The Nigeria Energy Support Programme (NESP) phase 3, of which GIZ has already successfully implemented the first phase and will be completing the second phase by May 2023.

The Commission authorises that the costs incurred may be recognised as eligible as of a date prior to the adoption of this Decision because the current project phase expires on 31 May 2023. Should this Decision not be adopted before this expiry date, a new contribution agreement containing an

<sup>3</sup> [www.sanctionsmap.eu](http://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.

exception to the non-retroactivity of costs may be signed to allow uninterrupted implementation of this EU flagship programme.

- **In output area 1:** The GIZ Get.Invest Nigeria window, the project which accelerates investments in clean energy projects across all relevant market segments and business models and contribute to the successful deployment of European financial instruments (such as in particular the EFSD+ instruments), will in its role as Team Europe One Stop Shop for Clean Energy Investments, provides critical and catalytic support to the mobilisation of investments and thereby directly contributes to the success of the Global Gateway and Team Europe initiatives.

One contribution agreement **in output area 1** with **AFD** is to implement the procurement of the installation of solar energy infrastructures for public health facilities (Being responsible for procuring all the equipment for the micro-grid and the EPC selection to do the installation.)

One contribution agreement is also to be signed with **UNIDO** for the implementation of the following projects pertaining to two different output areas:

- **In output area 1:** Six Small Hydro Power in Nigeria, under UNIDO's Regional Centre for Hydro Power; UNIDO has successfully implemented a number of SHP and agro-industry initiatives in Nigeria. Examples of such SHP initiatives include 150 kW in Bauchi State, and 400 kW in Taraba State, among others.
- **In output area 3:** Circular Economy in Plastics, building on UNIDO's lead on circular economy in Nigeria. Having supported the Federal Government of Nigeria with both policies on plastics and solid waste management, UNIDO is currently implementing some circular economy initiatives in Nigeria.

Also **in output area 3**, a separate contribution agreement will be signed with one of the international bodies expert in methane emission reductions in the oil and gas sectors, most likely such as UNEP, in particular the International Methane Emission Observatory managed by UNEP, and/or the World Bank's Global Methane and Gas Flaring Reduction Partnership.

These envisaged entities have been selected using the following criteria: long-standing cooperation with the EU in Nigeria's power sector, their expertise and input to the country's key policies tackling renewable energy and circular economy. Should there be unexpected obstacles to signature with one of these entities, a replacement will be sought fulfilling the same criteria.

#### 4.4.3 Contribution to the Africa Investment Platform

One contribution to Output area 1 may be implemented under indirect management with the entities, called Lead Finance Institutions, identified in the appendix 2 to this Action Document.

Under a contribution agreement for financial instruments, AFD will implement the on-grid solar operation under output 2, blending the EU contribution with a loan for solar infrastructure. This blending operation has a financing structure comprising of 75 million euros (loan) from AFD and 2 million euros (grant) from the EU for the construction of 200MW solar photovoltaic park in Jigawa.

The added value (or additionality) of EU support in these blending operations lies in the enhanced development impact through lowering the costs of much needed investments in access to energy and increasing the share of renewable energy in the country's energy mix, including on the grid. It can be assumed that the foreseen investment would be difficult to materialise without the EU grant component.

#### 4.5 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply. The Commission's authorising officer responsible may extend the geographical eligibility 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).

#### 4.6 Indicative Budget

Indicative Budget components	EU contribution (amount in EUR)	Third-party contribution, in currency identified (amount in EUR)
<b>Implementation modalities</b> – cf. section 4.4		
<b>Outputs 1:</b> Access to clean, efficient and reliable energy is increased through (i) renewable energy infrastructure investments for productive purposes, public services and private use and (ii) facilitation of access to finance for private sector investments	<b>21 600 000</b>	<b>75 000 000</b>
<i>Indirect management with UNIDO - cf. section 4.4.2</i>	<i>5 000 000</i>	
<i>Indirect management with AFD – cf. section 4.4.2</i>	<i>8 700 000</i>	
<i>Indirect management with AFD - cf. section 4.4.3</i>	<i>2 000 000</i>	<i>75 000 000</i>
<i>Procurement (direct management) – cf. section 4.4.1</i>	<i>1 900 000</i>	
<i>Indirect management with GIZ - cf. section 4.4.2</i>	<i>4 000 000</i>	
<b>Outputs 2 :</b> Renewable energy and energy efficiency are promoted through policy and regulatory support	<b>9 000 000</b>	<b>8 900 000</b>
<i>Indirect management with GIZ - cf. section 4.4.2</i>	<i>9 000 000</i>	<i>8 900 000</i>
<b>Outputs 3 :</b> Environmental pollution is reduced through targeted initiatives to promote circular economy and GHG emissions reduction	<b>6 000 000</b>	
<i>Indirect management with UNEP or World Bank- cf. section 4.4.2</i>	<i>2 000 000</i>	
<i>Indirect management with UNIDO - cf. section 4.4.2</i>	<i>4 000 000</i>	
<b>Evaluation</b> – cf. section 5.2	<b>400 000</b>	
<b>Audit</b> – cf. section 5.3		
<b>Totals</b>	<b>37 000 000</b>	<b>83 900 000</b>

#### 4.7 Organisational Set-up and Responsibilities

A governance structure will be put in place for all interventions of the Action. This will rely on the establishment of project **Steering Committees**, which will include representatives from the right-holder institutions, European Union, implementing partner and other stakeholders relevant to the objectives and activities of the specific project. Steering Committees will review and approve work plans and reports, review implementation and define actions to address issues identified.

For interventions targeting state level implementation, the steering committee will be set up with the state government acting as chairperson while interventions with national scope will have the Federal Ministry of Power as the Chairperson of the Project Steering Committee and benefiting agencies and other stakeholders to be identified by each project.

In addition, a broader **EU Project Coordination Forum** (EUPCF) will be in place to coordinate activities of all the individual projects, share information and best practices. This forum should also act as a dialogue mechanism for the EU with relevant high level Nigerian Government and donor community counterparts.

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



## 4.8 Pre-conditions

No pre-condition has to be met prior to implementation at federal level.

# 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 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).

Roles and responsibilities for data collection, analysis and monitoring:

The Action shall ensure that there is a systematic M&E system covering the overall Action as well as specific M&E for each components under the this action to capture their own progress towards implementation. The development of these project -level M&E systems shall be done in close association between EUD and each component leader IP. Yearly M&E sessions shall be set up at the level of the project, including the institutional beneficiaries' representatives, and regular M&E documentation shall be provided by the IPs (bi-annually or quarterly) to ensure a comprehensive follow-up and assessment.

The identification of the baselines and the collection of data shall be the responsibility of each IP leader while the overall M&E indicators follow-up shall be done by the EUD, with dedicated funds and staff, working closely with the M&E staff from each of the implementers. M&E focal points should also be identified within each of the institutional beneficiaries, to facilitate data gathering and collection, and smoothen the overall process.

Monitoring and evaluation will assess gender equality results, an impact on rights of groups living in the most vulnerable situations and the implementation of the rights based approach working principles (applying all human rights for all; meaningful and inclusive participation and access to decision-making; non-discrimination and equality; accountability and rule of law for all; and transparency and access to information supported by disaggregated data). Monitoring and evaluation will be based on indicators that are disaggregated by sex, age, disability and group when applicable.

## 5.2 Evaluation

Having regard to the importance of the action, a midterm and/or final evaluation will be carried out for this intervention or its components via independent consultants contracted by the Commission. The focus will be on problem solving, corrective measures, accountability and learning purposes at various levels (including for policy revision).

The Commission may 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 shall be shared with the partner country 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, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

The action will ensure gender and human rights expertise during all evaluation missions.

Evaluation services may be contracted under a framework contract. The evaluation will assess to what extent the action is taking into account the human rights-based approach as well as how it contributes to gender equality and women's empowerment. Expertise on human rights and gender equality will be ensured in the evaluation teams

### 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 has adopted a new approach to pooling, programming and deploying strategic communication and public diplomacy resources.

In line with the 2022 “[Communicating and Raising EU Visibility: Guidance for External Actions](#)”, 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<sup>4</sup> (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

<b>Action level</b>		
<input checked="" type="checkbox"/>	Single action	Present action: all contracts in the present action
<b>Contract level</b>		
<input checked="" type="checkbox"/>	Single Contract 1	Large scale PV solar power-plant with AFD
<input checked="" type="checkbox"/>	Single Contract 2	Small Hydro Power generation for Agriculture in Nigeria and Promoting Circularity of Plastic value chains in Nigeria with UNIDO
<input checked="" type="checkbox"/>	Single Contract 3	Solar for Health (delegation agreement) with AFD
<input checked="" type="checkbox"/>	Single Contract 4	Nigeria Energy Support Programme (NESP) 3 and GET.Invest Nigeria Country Window with GIZ
<input checked="" type="checkbox"/>	Single Contract 5	Methane emissions reduction programme in Nigeria with UNEP/World Bank
<input checked="" type="checkbox"/>	Single Contract 6	Solar for Health (procurement)

## APPENDIX 2 - Indicative list of Eligible financial institutions

Eligible financial institutions to submit blending proposals to the Africa Investment Platform for the implementation of activities under the proposed action.

Acronym of Legal Entity	Legal Entity (sub-entities covered (if any) via hyperlink)
ADB	Asian Development Bank
AfDB	African Development Bank
AU-IBAR	African Union
CABEI	Central American Bank for Economic Integration
CIFOR	Centre for International Forestry Research
DBSA	Development Bank of Southern Africa
EADB	East African Development Bank
EBRD	European Bank for reconstruction and development
EDFI	European Development Finance Institutions <sup>5</sup>
EIB	European Investment Bank
EIF	European Investment Fund
IADB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
NEFCO	Nordic Environment Finance Corporation
OIE	World Organisation for Animal Health
SPC	The Pacific Community
SPREP	South Pacific Regional Environment Programme
TDB	The Eastern and Southern African Trade and Development Bank
WBG	World Bank Group (IBRD, IDA, IFC, MIGA, ICSID)
WFP	World Food Programme
Acronym	National Agency, Country
AECID	Agencia española de cooperación internacional al desarrollo, Spain

<sup>5</sup> EDFI is an association of 15 bilateral European development finance institutions with a private sector mandate. These institutions are the Belgian Investment Company for Developing Countries (BIO), the CDC Group, Compañía Española de Financiación del Desarrollo (COFIDES), the German Investment and Development Corporation (DEG), the Finnish Fund for Industrial Cooperation (FINNFUND), the Netherlands Development Finance Company (FMO), Denmark's Investment Fund for Developing (IFU), the Norwegian Investment Fund for Developing Countries (Norfund), the Development Bank of Austria (OeEB), France's Proparco, the Belgian Corporation for International Investment (SBI-BMI), the Swiss Investment Fund for Emerging Markets (SIFEM), Società Italiana per le Imprese all'Estero (SIMEST), Portugal's Sociedade para o Financiamento do Desenvolvimento (SOFID) and Swedfund International AB.

AFD	Agence française de développement, France
BIO	Belgian Investment Company for Developing Countries
CDP	Cassa depositi e prestiti S.p.A., Italy
COFIDES	Compañía española de financiación del desarrollo, Spain
DEG	Deutsche Investitions- und Entwicklungsgesellschaft mbH, Germany
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden, Netherlands
KfW	Kreditanstalt für Wiederaufbau, Germany
PROPARCO	Groupe Agence Française de Développement, France
RVO	Rijksdienst voor Ondernemend Nederland (Netherlands Enterprise Agency), Netherlands
SIMEST	Società Italiana per le Imprese all'Estero, Italy
USAID	United States Agency for International Development, USA