

United Nations Development Programme



PROJECT DOCUMENT

Country: LIBYA
Project Title: Support to Energy Transition in Libya
Expected UNDAF/CP Outcome(s): By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation.
Expected CPD Output(s): State, civil society and private sector capacities to mitigate climate change and foster green growth and renewable energy transition are enhanced.
Implementing Partner: UNDP(Direct Implementation)

Brief Description

Libya's energy system is 100% carbon based. It is characterized by a high degree of technical and financial losses resulting from inefficiencies, aging infrastructure and a highly subsidized, public service sector which is often unable to respond to the demands of its clients. Moreover, the subsidized, fully integrated monopoly currently crowds out alternatives from the private sector, stultifying innovation.

This project aims to support transition of Libya's energy system to one that is low-carbon, equitable and resilient – capable of delivering reliable electricity to a growing population and economy in an environment that is increasing pressurized by the impacts of climate change. Given the close linkages between the energy transition, water security and climate change, this document is developed in a manner that compliments other UNDP programming in these two other sectors.

The first output focus on socialising and promulgating policy and regulatory reform to create the conditions for energy efficiency and investment in renewable energy. The second output focuses on the detail required to catalyze a major shift in energy efficiency across all economic sectors. The third output focus on catalysing investment in renewable energy projects.

Project Start Date: 01/07/2023
 Project End Date: 30/06/2026

Project /Output ID: _____

Gender Marker: **Output 1 Gen 2**
Output 2 Gen 2
Output 3 Gen1

Budget 2023-2025 (a): 16,568,786

Available Resources: (b) 2,220,000

- Regular (TRAC) _____
- Other:
 - Donor (Code) EU_____
 - Donor (Code) _____
 - Donor (Code) _____
 - Government _____

Unfunded budget (a – b): 14,348,786

Approved by UNDP:

Christopher Dennis Laker
 Resident Representative a.i.
 Date 15-Dec-2023

DocuSigned by:

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I. DEVELOPMENT CHALLENGE

The UN Libya Common Country Analysis emphasizes the need for continued support to the peace process while addressing the root causes of political fragility and conflict to create a stable and sustainable peacebuilding and State-building environment. Sustainable growth through improved natural resources management is vital not only to mitigating the impacts of climate change and more sustainably managing natural resources, but it is vital for Libya to begin diversifying its energy system and economy so that it can prosper in a world where demand for fossil fuels will start declining. In this way promoting the energy transition in Libya is vital not only to mitigating the causes and effects of climate change but to set the Libyan economy on a more sustainable development pathway.

At the moment, Libya's economy relies heavily on two natural resources, namely fossil fuels and fossil water. Gas and oil exports provide 87% of government revenue and 95% of its foreign currency and non-renewable fossil water provides with over 80% of its fresh water supplies. As identified by the World Bank, Libya's reliance on fossil fuels gives it the highest exposure of any country in the world to global commodity market price fluctuations. More fundamentally, it exposes Libya to the long-term challenge of reconciling itself to the consequences of the global energy transition which will almost certainly result in much of its resources and infrastructure becoming stranded assets. Similarly with water, Libya's heavy reliance on fossil water and its low level of water rationalisation and investment in alternative water sources, make it highly water stressed. This latter vulnerability is the most immediate risk for the country and most impactful.

To address these risks, Libya needs to move forward with the energy transition so that it becomes less reliant on fossil fuels in its domestic energy mix thereby consuming less of its primary export. Currently, Libya electrical energy generation mix is as follows: 73% of its natural gas production, 16% light fuel, 6% heavy fuel, 5% crude oil, 0% renewable. Of this, Libya consumes 10% of its own domestically produced oil and nearly 70% of its gas for electricity production. This financial cost increases significantly when the fuel it needs to purchase on the global market is included. These costs, which are currently increasing, would reduce if Libya successfully transitions its energy system through energy efficiency and renewables.

The ability of Libya to address these risks is complicated by increased demand resulting from population and economic growth as well as the impacts of climate change. Higher temperatures create stress on national electricity grids. As people turn on their air conditioners, demand increases at the same time as the ability of public utilities to produce electricity diminishes.¹ As a general rule, the higher the ambient temperature, the lower the efficiency of electricity generation and transmission. The ideal temperature for conventional thermal electricity generation is 8°C with levels of efficiency diminishing by approximately 0.7% with every degree of warming.² Similarly, further losses occur during transmission with transmission efficiency lowering by 3% with every degree of warming.³ The direct result of higher temperatures is that Libya will need to produce an increasing amount of electricity just to maintain current levels.

In a similar dynamic to that of electricity, water demand in North Africa is projected to increase by 50% by 2050 with water shortages increasing by 12%.⁴ The majority of this increase, some 78%, is due to socio-economic factors such as increasing population and GDP. However, some 22% of the

¹ A one-degree temperature increase in summer days may lead to 0.015% more electricity consumption per capita, lower correlation in cold weather. Zhang, C., Liao, H. & Mi, Z. (2019) Climate impacts: temperature and electricity consumption. *National Hazards*, 99, 1259–1275.

² Şen, G.; Nil, M., Mamur, H., Doğan, H., Karamolla, M., Karaçor, M., Kuyucuoğlu, F., Yörükeren, N. and Bhuiyan, M.R.A. (2018). The effect of ambient temperature on electric power generation in natural gas combined cycle power plant—A case study. In: *Energy Reports* 4, pp. 682-690; Hasan Hüseyin Erdem, Süleyman Hakan Sevilgen (2006) Case study: Effect of ambient temperature on the electricity production and fuel consumption of a simple cycle gas turbine in Turkey, *Applied Thermal Engineering*, 26: 2–3, 320-326.

³ Higher temperatures also increase the electrical resistance of the circuits that convert the photovoltaic charge into AC electricity.

⁴ Water demand is projected to increase by 393 km³ yr⁻¹ by 2050, while total water shortage will grow to 199 km³ yr⁻¹ in 2050 for the average climate change projection, an increase of 157 km³ yr⁻¹. Droogers, P., Immerzeel, W. W., Terink, W., Hoogeveen, J., Bierkens, M. F. P., van Beek, L. P. H., and Debele, B.: Water resources trends in Middle East and North Africa towards 2050, *Hydrol. Earth Syst. Sci.*, 16, 3101–3114.

increase is due to climate change.⁵ Most climate related water demand increases are due to evaporation but also to the need for increased cooling in industry and power generation.⁶

Agriculture and food security will also be impacted by growth and climate change. Although the contribution of agriculture to GDP has decreased as Libya became increasingly reliant on hydrocarbons, this sector continues to be a source of employment. In Libya, where agriculture's share in GDP is around 3%, some 18% of the population, many of whom are in the south, are employed in this sector.⁷ The capacity of a country to produce food also impacts a country's food security situation. FAO defines food security as the degree to which people have physical and economic access to sufficient safe and nutritious food that meets their dietary needs for an active and healthy life.⁸ While many variables impact food security among the most important is domestic agricultural production due not only to food supply but also its contribution to purchasing power.⁹ Given that 18% of the Libyan population is reliant on the agricultural sector for employment, ensuring that this sector continues in a sustainable manner is vital not so much for the food it produces but the employment it provides.

Libya currently has the highest per capita greenhouse gas emission in Africa and, if preliminary studies are correct, the rate of emissions is higher than that of any country in Europe. The quickest and most cost-effective way to reduce emissions is to lower the carbon intensity rate of the way it produces electricity, oil and gas. Most of these emissions are due to leaks as well as the venting or flaring of methane. Reducing the emissions in production is crucial not only for Libya but also for its downstream consumers, namely the EU which consumes the vast majority of Libyan oil and gas.

Gender-blind energy sector policies and programmes fail to integrate women's experiences, expertise and capacities, and risk further exacerbating the gender gap between men and women in the energy access context. An examination of renewable energy policies in 33 countries by the United States Agency for International Development (USAID) and ENERGIA found that only 6 policies (18%) included gender keywords and considerations.

The lack of skills is a key barrier faced by women seeking to participate in efforts to expand modern energy access through off-grid renewable energy solutions.

II. STRATEGY

Project strategy and structure

This programme contributes to the third pillar of the UNDP Country Programme Document (2023-2025) "Promoting sustainable green growth and enhancing resilience to climate change." This pillar is aligned with Outcome 4 of the United Nations Sustainable Development Cooperation Framework (2023-2025) which advocates for proactive measures to be taken to address climate change, environment and water. Although energy transition is only one component of this outcome, its success underpins progress in all the other sectors including green growth, water and environmental sustainability.

The overall objective of this project is to further the energy transition in a manner that lowers carbon intensity, improves resiliency and performance while lowering long term costs. In a country, such as Libya, where the prevailing social and rentier economy is based almost exclusively on the production and sale of fossil fuels, such a transition necessitates an integrated, whole of society approach. This whole of society approach is reflected by the three outputs of the project: i.) energy sector gender responsive strategy and policy, ii.) energy efficiency and iii.) renewable energy.

⁵ Droogers, P., Immerzeel, W. W., Terink, W., Hoogeveen, J., Bierkens, M. F. P., van Beek, L. P. H., and Debele, B.: Water resources trends in Middle East and North Africa towards 2050, *Hydrol. Earth Syst. Sci.*, 16, 3101–3114.

⁶ IPCC (2007a). IPCC Fourth Assessment Report: Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability. Geneva, Switzerland: IPCC. Retrieved 11.07.2021 from https://archive.ipcc.ch/publications_and_data/ar4/wg2/en/ch3s3-5-1.html.

⁷ <https://tradingeconomics.com/libya/employment-in-agriculture-percent-of-total-employment-wb-data.html>

⁸ <https://www.fao.org/3/al936e/al936e00.pdf>

⁹ Pawlak K, Kołodziejczak M. (2020) The Role of Agriculture in Ensuring Food Security in Developing Countries: Considerations in the Context of the Problem of Sustainable Food Production. *Sustainability*. 12(13):548

The first output focuses on socialising and promulgating policy and regulatory reform to create the conditions for energy efficiency and investment in renewable energy. This normative approach which is often focused on stimulating behavioural change is supplemented and reinforced by a public awareness campaign which includes activities to create awareness of both the dangers and opportunities of an energy transition supporting this with training and education targeting youth and women and minorities.

The second output focuses on the detail required to catalyze a major shift in energy efficiency across all economic sectors. In practice this translates to the development, promulgation and outreach on a set of energy efficiency standards, regulations and import controls covering all of the energy consuming sectors excluding transport. These sectors are lighting, building structures and materials, air conditioning, consumer appliances and equipment and industrial equipment.

The third output focuses on catalysing multiple new major renewable energy projects. The rationale for this focus is the ongoing UN led donor and partner coordination in the Libyan energy sector. Two other organizations and partnerships, USAID and GIZ, are currently covering the governance and capacity building needs for the Libyan Renewable Energy (RE) sector. The key gap identified by the UN to be filled with this project is converting the general interest and background work in RE projects into actual built infrastructure – which as of 2023 has yet to occur at scale anywhere in Libya. The focus of this output is the front-end development of projects, which is a technically and legally intensive process. The financing and construction of the developed project is foreseen to be taken up by others, namely the government of Libya and Libyan and international investors.

The programme will harness the expertise of UNEP and its related programming and combine it with UNDP's own experience in climate mitigation and adaption to support state institutions in devising greener, risk informed growth strategies. The programme will also aim to devise policy reforms and programming that target the most vulnerable communities, particularly those that are subject to energy poverty either due to lack of access or lack of income. The energy programme will also seek to maximize co-benefits including in reducing the levelized cost of energy, improving its resiliency to climate change impacts and improving access and the sustainability of water resources.

The complementarity and synergy between these programmatic interventions are part of a package of efforts, along with climate change and water programming, that contribute to attaining the 2030 Sustainable Development Agenda and the Paris Agreement on Climate Change as well as UNDP's ongoing focus on improving local development and the enhancement of basic social services. UNDP will leverage its decades long history in Libya to develop a programme that is fit-for purpose and is implemented in a manner that fosters close engagement with national stakeholders including civil society and the private sector as well as synergies with other UN and international programming.

Project Rationale

The programme aims to support energy transition in Libya in order that its system become more resilient, sustainable, gender responsive and cost effective. By combining policy reform, capacity building and public education with support for catalytic investments in renewable energy infrastructure, the programme supports Libya along a pathway that will reduce its dependence on fossil fuels while addressing the impacts of climate change. The programme will be implemented in a manner that promotes other co-benefits including economic diversification, decentralisation, improvement in vital services, climate change mitigation and women and youth participation. The programme will support the achievement of SDGs 7 and 13.

Theory of Change

The project's Theory of Change focuses on creating the conditions and incentives needed to allow Libya to join the global energy transition and to do so in a manner that promotes economic growth, climate resiliency, gender responsive and water security.

The theory of change argues that:

If the policies and regulations are amended to incentivize energy efficiency, public-private sector investment in renewable energy; and

If Libya has the technical capacity, particularly among the youth and women, to find employment in the energy transition market and the public is sufficiently educated and motivated to support the energy transition; and

If incentives are provided to the public to improve energy efficiency; and

If support is provided to pilot renewable energy infrastructure, particularly that which promotes water rationalisation;

Then Libya will begin to diversify its economy and reduce its domestic dependency on oil and gas making it more resilient to global market price shifts, more capable of mitigating the causes of climate change while also becoming resilient to climate impacts. The shift to low carbon, low waste and low-cost energy system will also preserve financial resources for investment in other critical sectors in Libyan society restoring hope in Libyan society that the country will move beyond a decade of conflict and instability, while achieving SDGs 7 and 13.

III. RESULTS AND PARTNERSHIPS

Expected Results

The project aims to mitigate climate change by reducing carbon emissions through policies and investments which incentivize energy transition in Libya. This will be done in a manner that is complementary to related initiatives including the development of an integrated climate change strategy. The project will also promote other co-benefits including in diversifying the economy, decentralising and improving vital services and insulating the country from the impacts of climate change. The project results are defined hereafter in the form of one top level result and three outputs generated by the delivery of activities and underlying tasks:

Project Result: Libya commences its national scale energy transition, towards a more energy-efficient, inclusive, gender responsive and sustainable economy, electrically powered by a mix of renewable energy and natural gas power plants.

Output 1. National energy sector gender responsive policies and strategies are developed, implemented and publicly supported.

Output 2. National energy efficiency is improved across the lighting, building, cooling, heating, domestic appliance, industrial equipment, and heavy industry sectors.

Output 3. Multiple large scale renewable energy projects are developed and financed to the construction ready stage in Libya.

The key elements of the proposed project are summarised below, following the logical framework structure.

Output 1. National energy sector reforms are developed, implemented, and publicly supported.

In Libya the needed transition from an oil dominated very wasteful energy economy has barely started. At present, Libya does not have an Energy Ministry nor any form of national energy strategy. Power is highly centralised at the Prime Minister level, although this is continually challenged by the parallel government in the east. Individual efforts are siloed and compete for attention at the national

level, whilst some sectors such as transport, are simply not addressed. Disconnects between the oil and gas sector and the gas consuming electricity generation sector continue to cause economic and social problems.

In this context, the planned UNDP strategy is to support energy sectors reforms building on the implemented activities under the LESST project, from first principles and using a combined top down, gender responsive and bottom-up approach.

At the top level the aim is to support the Government of Libya to develop a truly integrated, inclusive, gender responsive and longer-term looking energy strategy, that simultaneously addresses economic, energy security and climate issues. The targeted institutions include the Office of the Prime Minister, the Ministries of Planning, Water, Environment and Oil, the government think tank (the National Economic and Social Development Board-NESDB), and the State-Owned Enterprises for oil, electricity, renewable energy and water. These institutions will receive both technical assistance and technically oriented capacity building.

At the public level, the aim is to generate awareness and a public discussion of the key issues, to provide input into the high-level processes and generate political support for the resultant plans.

Output 1 National energy sector gender responsive policies and strategies are developed, implemented and publicly supported.

Activity 1.1 Technical assistance, capacity building and outreach on national gender responsive energy policies, strategy, and reform implementation plans, at three levels of Libyan society is developed.

Tasks:

1.1.1 High level technical assistance provision to the Energy Supreme Council, NESDB, REAOL, Gecol and other GoL bodies on energy gender responsive strategy and policy

1.1.2 Energy sector issue awareness raising, consensus building and entry level capacity building for key government institutions.

1.1.3 Public outreach and convening a public forum on energy reform, policy, and strategy issues.

1.1.4 Fill capacity gaps through training and sensitization initiatives.

Activity 1.2: Technical assistance and implementation of Restructuring and Utility Unbundling Reforms (The unbundling of accounts) to the General electricity company of Libya is delivered.

Tasks:

1.2.1 Preparing pro forma financial statements to support planning for accounting separation.

1.2.2 Based on new accounts, estimating of all costs for each business unit, capturing any changes in costs due to staffing and organizational changes resulting from unbundling, and conduct financial analysis to estimate payments between different business units.

1.2.3 Identify a date for transition to the new account structure (e.g., start of a new fiscal year) and adjust accounting software, accounting manuals, etc., necessary to support the new accounting system.

Output 2: National energy efficiency is improved across the lighting, building, cooling, heating, domestic appliance, industrial equipment, and heavy industry sectors.

Libya has a very energy inefficient economy and culture, with high levels of waste in virtually every economic sector. This is due to nearly 50 years of oil-production and export financed subsidisation of energy costs. The culture is however just starting to change as electricity blackouts have illustrated the unsustainable status quo.

Since early 2022, the Government of Libya has undertaken several promising initial steps, via early but in-depth work on energy efficiency, led by the National Economic and Social Development Board with a mandate from the Prime Minister. This has resulted in some early direct success, such as the approved national standards for air conditioning imports. The UNDP has provided critical technical assistance to the NESDB throughout 2022.

The project strategy is to continue and greatly expand the technical assistance to the NESDB and other stakeholders, gradually working through all of the key sectors.:

Activity 2.1 Technical assistance, capacity building and outreach for gender responsive lighting energy efficiency standard is delivered.

Tasks:

- 2.1.1 Implement a national gender sensitive/responsive Market Assessment on Lighting in Libya
- 2.1.2 Development, drafting, submission, consultation, and finalization of the Minimum Energy Performance Standards (MEPs) and Labelling for LED and other lighting in Libya
- 2.1.3 Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.

Activity 2.2 Technical assistance, capacity building and outreach for building sector energy gender responsive construction codes delivered.

Tasks:

- 2.2.1 Establishment of and capacity building for a cross sectoral Policy Working group for the development of Libya's Building Code.
- 2.2.2 Development, drafting, submission, consultation, and finalization of the building code
- 2.2.3 Guide development, training, and public and sector outreach to support implementation of the building code.

Activity 2.3 Technical assistance, capacity building and outreach for gender responsive air conditioner energy efficiency delivered.

Tasks:

- 2.3.1 Implement a national gender responsive Market Assessment on Air Conditioning (ACs) in Libya
- 2.3.2 Development, drafting, submission, consultation, and finalization of the Minimum gender responsive Energy Performance Standards (MEPs) and Labelling for ACs in Libya
- 2.3.3 Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.

Activity 2.4 Technical assistance, capacity building and outreach on gender responsive domestic heating and appliances energy efficiency delivered.

Tasks:

2.4.1 Implement a national gender responsive Market Assessment on water heaters, space heaters, washing machines and domestic appliances in Libya.

2.4.2 Development, drafting, submission, consultation, and finalization of a set of Minimum gender responsive Energy Performance Standards (MEPs) and Labelling for domestic heating and appliances in Libya

2.4.3 Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.

Activity 2.5 Technical assistance, capacity building and outreach on industrial equipment energy efficiency delivered.

Tasks:

2.5.1 Implement a national gender responsive Market Assessment on industrial equipment (electrical motors, pumps, boilers, fans, compressors) in Libya.

2.5.2 Development, drafting, submission, consultation, and finalization of a set of Minimum gender responsive Energy Performance Standards (MEPs) and Labelling for industrial equipment in Libya

2.5.3 Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.

Activity 2.6. Support for the gender responsive LED lighting rapid upgrade project proposal implemented.

Tasks:

2.6.1 Securing a high-level government mandate and supporting development of a national working group and project team.

2.6.2 Detailed project and finance development support (*including co-financing the exchange scheme*)

2.6.3 Post-Financing detailed project implementation support

Activity 2.7 Creation of a national Energy Efficiency laboratory and certification centre supported.

Tasks:

2.7.1 Scoping, design, siting, finance planning and team design for a national EE laboratory and certification center

2.7.2 Financing equipment procurement support

2.7.3 Financing building construction/renovation and fit-out technical support

2.7.4 Post construction team capacity building and laboratory launch support

Activity 2.8 Heavy industry energy efficiency upgrade projects supported.

Tasks:

2.8.1 Facility energy audits, upgrade plan development and financing search for 5 medium and heavy industry facilities

2.8.2 Post financing technical and project support for detailed implementation of EE upgrade projects for 2 facilities.

Output 3. Multiple large-scale gender responsive Renewable Energy projects are developed and financed to the construction ready stage in Libya.

As of end 2022, Libya has effectively 0% renewable energy installed and contributing to the national grid. A range of projects are in development, but most are in the conceptual stage with limited evidence of feasibility assessments or financing. This indicates how far Libya is behind in the global transition to renewables.

A range of regulatory and market reforms are needed in order to encourage investment in renewables in Libya. Some of these are underway and technically supported by other donors in other projects. Others are yet to start, and the scope of Output 1 includes advocacy and technical assistance to fill this gap.

Output 3 takes a different approach, aiming to catalyze multiple large and strategic gender responsive solar projects in Libya, focusing on the complex process of project development. This process can take 1-3+ years and so early work on projects is expected to run in parallel to, rather than wait for the regulatory reforms.

To encourage Libyan partners to start implementing grid-connected solar photovoltaic systems, a pilot project based on grid-connected photovoltaic technology will be set up as a pilot project to provide them with the necessary expertise to operate this type of grid-connected power plant, whether for connection or control engineers.

Early work by the UN and others over 2020 – 2022 has identified a range of priority projects and UNEP and UNDP have completed a first-round feasibility study for one project: Community Solar 1, proposed for southwest Libya.

The generic development process for large projects is divided by the UN into three stages, with the proportional cost increasing exponentially with each stage:

- Idea generation and initial screening and feasibility studies (1- 2% of development costs).
- Early development work focused on a specific site (2 – 20% of development costs)
- Final detailed development work, which typically focuses on detailed land investigations, legal agreements, and securing financing for the subsequent construction. (80%+ of development costs)

The main exception to this process is for technically complex unitary projects, which entail replication of technically complex systems. One potential example for Libya is the use of solar and battery combinations to individually power the 500+ operating water wells of the MMRA. In this case, UNDP may extend its support to turn-key installation of 1 unit, thereby demonstrating the technology and setting up the conditions for rapid replication.

Activity 3.1. A 1 MW grid-connected PV solar power plant developed, installed, and handed over.

Tasks:

3.1.1 Preparing project development plan with REAOL & GECOL

3.1.2 Prefeasibility study &

3.1.3 Feasibility study of the project + site identification includes all required studies for the site like geotechnical survey and etc.. +Technology selection

3.1.4 Project Implementation: Engineering, Procurement and Construction (EPC phase)

3.1.5 Commission the project and Develop capacities for Renewable Energy Authority of Libya (REAOL).

3.1.6 Establishment of a structured training programme for national experts, technicians, academics, and students throughout the construction of the plant

Activity 3.2. Fifteen (15) standard wind masts at recommended sites in Libya to promoting Utility Scale Power Generation from Wind Energy installed.

Tasks:

3.2.1 Preparing project development plan with REAOL & GECOL for establishment of wind measurement masts in Fifteen (15) different locations.

3.2.2 Preparation of bid documents including technical specifications of wind masts.

3.2.3 Supply, Installation, Commissioning of fifteen (15) standard wind masts at recommended sites in Libya

3.2.4 Capacity building of the national experts and technicians from Renewable Energy authority of Libya (REAOL)

Activity 3.3. Early project development for multiple gender responsive solar projects supported.

Tasks:

3.2.1 Post feasibility study project development for the MMRA floating solar project.

3.2.2 Post feasibility study project development for the MMRA eastern wellfield autonomy project

3.2.3 Post feasibility study project development for the Southwest Community Solar 1 project

3.2.4 Concept screening and development support for the REAOL project portfolio

Resources Required to Achieve the Expected Results

The total projected cost of the project is almost USD sixteen million and is anticipated to be supported by multiple donors in stages over 36 months. As Libya is a crisis country many donor instruments are flexible and allocated via annual budgets.

The project delivery model is based on the continuation of an existing UNDP-UNEP partnership, with the latter providing ad hoc technical expertise.

The following human resources are required to implement the project:

Part time allocation of a UNEP senior energy expert, delivered via a UNDP-UNEP partnership.

Full time allocation from UNDP staff and consultants:

- **Project Manager:** The Project Manager will be leading and have the overall responsibility for management of the project including timely and efficient delivery of the project technical, operational, financial and administrative outputs, as well as overall coordination with the UNDP team, the project beneficiaries, and project partners to ensure coherence and complementarity.
- **Senior Energy Advisor:** The Energy Senior Expert will oversee and provide all technical guidance for the implementation of activities for the project.
- **Technical Engineers:** UNDP engineering unit and engineers will oversee all projects related to infrastructure and equipment and engage with local institutions and stakeholders in implementation of the project at site level.
- **Project Management Analyst (PMA):** Will be responsible for the sound management of the project financial management, including preparing requests for advance of funds and/or direct payments, monitoring budget expenditures and maintaining a proper record of approved project budgets and their revisions, and submitting expenditure and programme budget status reports, human resources, operations, resources management, accounts receivables, monitoring and following up the finance dashboard. S/he will provide support to the project manager in the implementation of tasks critical for the achievement of project results (communication, contracts, agenda, visas, hotel reservations, etc.), including maintaining project files and records, making pertinent logistical arrangements (including arranging for the procurement of equipment, supplies, and services), and assuming overall responsibility for administrative matters. In addition, the PMA will arrange external and internal meetings; and draft TORs, concept notes and other background papers as requested by the project coordinator.
- **Monitoring, Reporting and Evaluation Specialist/Analyst:** Will be responsible for the project donor reporting, including gathering inputs from the project to prepare narrative reports, and coordinating the overall submission process. The M&E Specialist will support the Project Manager to develop and implement a results-based M&E system for tracking the project's performance and results.

Part time support from multiple UNDP Libya Office support units:

- **Programme Management Unit:** The Programme Management Unit will provide strategic guidance and enhance programmatic support to the project, ensuring cross-unit cooperation and coordination of the project with other interventions in Libya and partnership with the Libyan authorities at all levels. Responsible for management of higher-level relationships with Government counterparts relevant and alignment with the national development priorities to ensure sustainability of the programme interventions. Also, the Programme Management Unit will provide financial reporting and ensure that objective monitoring and evaluations are designed and managed to assess the relevance, effectiveness, efficiency, impact and sustainability of the project results.
- **Programme Management and Support Unit:** The PMSU provides quality assurance and oversight related to the UNDP Policies and Procedures for quality programming, result-based management, budgeting and financial management, and internal and donor reporting.
- **Operations Units:** The UNDP operations units provide procurement, finance, human resources, security, administrative services support to the implementation of all projects, in compliance with the UNDP operational policies and procedures.
- **Communications, Gender and Partnerships:** the project implementation and reporting is supported by the UNDP communications, gender and partnerships units, who provide regular and need-based advisory and support services.

Partnerships

UNDP will work in partnership with both national and international actors. At a programmatic level, each actor has already identified their focal points who will remain in constant contact with UNDP's programme team. At a strategic level, UNDP and its partners will coordinate through the UNEP managed Libyan Energy Club which continues to meet every two months.

At a national level, the main government partners include Ministry of Planning, General Company of electricity of Libya (GECOL), Renewable Energy authority of Libya (REAOL), the National Oil corporation (NOC), Ministry of Economy, Ministry of Oil, Prime Minister's Office, the National Social and Economic Development Board, and Ministry of the Environment. At a local level, partnerships are being developed with municipalities, civil society, technical institutions, and universities.

The programme also works closely with partners USAID/LPFM and GIZ. USAID/LPMF continues to work closely with GECOL to develop its technical capacities but also its regulatory, legal and efforts including the draft Electrical Energy Law, and the legal instrument to establish a Regulatory body. The programme also works closely with GIZ who is working primarily with REAOL to increase its technical capacities including trainings as well as technical advisory services in the pursuit of development projects, solar atlas, and other services.

Risks and Assumptions

There are several contextual and structural risks to this project which have been considered and, to the extent possible, mitigated. The first risk is due to the protracted nature of the conflict in Libya. This can affect both the delivery of services and infrastructure projects. It can also distract local actors and stakeholders as they prioritize other issues rather than those of the programme.

This risk will be managed first by situational awareness which will be ensured by continuous and direct engagement and consultation with international and local partners. This will allow for logistical and tactical adjustments to be made. These adjustments will, however, be tactical in nature not changing the overall outputs of the programme. If broader changes are needed, a request will first go to the Programmatic Board for direction and authorisation.

Availability of investment for energy transition infrastructure. This can be addressed by contacting the focal points and managing funds from the government and through putting in place a fund mobilization strategy in consultation with partnership focal points seeking also for innovative partnerships through the private sector.

Additionally, the current programme is already designed with a focus on some of the structural causes of conflict – including the need for responsive service delivery, effective and accountable local governance and the community security and peacebuilding.

Preventing, managing, and resolving violent conflict is at the core of UN's approach in this project and UN does not seek to work around conflict (a principle applying commonly to humanitarian action for example). Rather, though this project, UN will seek to exploit any opportunity to positively affect conflict dynamics – and not just through specific so-called "peacebuilding" activities.

In this regard, the project will seek to avoid contributing inadvertently to fueling conflict drivers by sticking to recognised principles for do-no-harm, such as by maintaining a close and dynamic understanding of the context in each target location, by keeping equality of participation across community divides, as well as by building in all activities, adequate consultation and communication with the community at large.

Beyond conflict dynamics, the other risk in the Libyan context is the inertia of the incumbent utility. This inertia is created by established ways of working as well as vested interests in the current energy system. This risk is compounded by the heavy subsidy system and the continually low tariff rate. These dynamics have frustrated efforts to move forward with private sector investment in renewable

energy as they lack the status of independent power producers and have difficulty making a viable financial plan for their investments.

This risk is mitigated by two strategies. The first is to employ multiple lines of intervention that will move in parallel to each other. This diversification of the programmatic portfolio mitigates risk as not all the programmes will be affected the same way by the same perturbation. This diversification of the programmatic portfolio has the additional benefit of allowing the programme to leverage advances in one to unblock obstacles in another programme. For example, impediments to pass through policy reform may be unblocked by public sensitisation and advocacy programming.

Stakeholder Engagement

UNDP seeks to contribute to the overarching aspiration that all people in Libya, including women, youth and vulnerable and marginalized groups, benefit equally from sustainable peace and enhanced rule of law, democratic governance, livelihoods and a climate-resilient future.

Target beneficiaries are the citizens of Libya, at both national level and in selected locations where new renewable energy projects could provide improved energy security, employment and a longer-term economic boost. In addition, UNDP Libya will engage, as necessary, local governments in the selected locations, and institutions, and academia.

South-South and Triangular Cooperation (SSC/TrC)

The energy transition project aims to support Libya in catching up to other countries in the North Africa and the MENA region in terms of efficiency and renewable energy. Currently, Libya is the only country to have no on-grid utility scale solar energy capacity and is among the highest in terms of energy inefficiency. As a result, Libya imports electricity from both Tunisia (250 MW) and Egypt (240 MW) even though its population and production capacity is a fraction of its neighbours.

Provided, Libya is able to improve its efficiency and electricity generation through renewables, Libya could become a net exporter of electricity using and upgrading the regional inter-connectivity to build upon the common North African power pool.

Digital Solutions

The project will work to upgrade the digital capacities within Libya to better utilize data to identify the most cost-effective areas to improve energy efficiency and to inform decision making.

Knowledge

Learning from previous Environment domain, the programme management team will develop a Knowledge Management strategy at the National level for Environment programming which will then be adapted to suit the specific context of this project.

The strategy will cover internal knowledge management (documentation of the project activities, progress, current status and challenges, contacts of main partners, contract documentation, baseline and monitoring data as well as financial progress) as well as external knowledge management and branding (production of knowledge products, research reports, blogs, articles, ppts, social media posts, traditional media products, community branding items) which support the achievement of the project objectives and helps to strengthen partnerships with key stakeholders.

Sustainability and Scaling Up

Sustainability and scaling up are core design principles for the project. The overarching strategy is based on using international aid to help catalyzing the conditions for national actors and international

investors to then move into, grow and reform the Libyan energy sector. This entails removing the obstacles and lowering the risks that currently keep these actors from engaging in depth in the sector. It also entails attempting to reform the incumbent institutions, so that they transition from being part of the problem to part of the solution.

The detailed work on energy efficiency is designed to modify existing financial flows towards more efficient products and projects. The detailed work on renewable energy project development is designed to enable national government, national private and international investors to bring large scale funding to “shovel ready” large solar construction projects. The project structures are designed to enable the UN to cleanly handover its work to these investors and national government regulators.

IV. RESULTS FRAMEWORK

Intended Outcome as stated in the UNSF Results and Resource Framework: COOPERATION FRAMEWORK OUTCOME INVOLVING UNDP #4.1 By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation.								
Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: Indicator 3.1. Renewable energy share in the total final energy consumption. Baseline (2021): 0.03% Target: 0.5% Indicator 3.4. Percentage of population with access to electricity Baseline (2019): 68.5% Target (2025): 90%								
Applicable Output(s) from the UNDP Strategic Plan: Energy								
Project title and Atlas Project Number: Support to Energy Transition in Libya								
EXPECTED OUTPUTS	OUTPUT INDICATORS ¹⁰	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)			DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2023	Year 2024	FINAL 2025	
Output 1 <i>National energy sector gender responsive policies and strategies are developed, implemented and publicly supported</i>	1.1 <i>Energy gender responsive policy briefs delivered to the GoL.</i>	Quarterly project reports	0	2022	1	2	5	• Direct observation • Administrative data analysis • Report • Unstable political and security situations may cause the delay in implementation
Output 2 <i>National energy efficiency is improved across the lighting, building, cooling, heating, domestic appliance, industrial equipment, and heavy industry sectors.</i>	2.1 <i>National gender responsive regulations and guidance covering the lighting, building, cooling, heating, industrial equipment, and domestic appliance delivered to the GoL.</i>	Quarterly project reports	0	2022	2	3	6	• Developed standards. • An unstable political situation may cause delay in the policies development

¹⁰ It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

	Intended Outcome as stated in the UNSF Results and Resource Framework: COOPERATION FRAMEWORK OUTCOME INVOLVING UNDP #4.1 By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation.							
	Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: Indicator 3.1. Renewable energy share in the total final energy consumption. Baseline (2021): 0.03% Target: 0.5% Indicator 3.4. Percentage of population with access to electricity Baseline (2019): 68.5% Target (2025): 90%							
	Applicable Output(s) from the UNDP Strategic Plan: Energy							
	Project title and Atlas Project Number: Support to Energy Transition in Libya							
EXPECTED OUTPUTS	OUTPUT INDICATORS ¹⁰	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)			DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2023	Year 2024	FINAL 2025	
	2.2 Govt of Libya procures or subsidizes LED lights	Quarterly project reports	0	2022	0	2 reports	5 reports	- GoL reports - An unstable political situation may delay or stop the initiative
	2.3 Govt of Libya opens the national Energy Efficiency testing centre	Quarterly project reports	0	2022	0	0	1	- GoL reports - An unstable political situation may delay or stop the initiative
Output 3 Multiple large scale Renewable energy projects are developed and financed to the construction ready stage in Libya	3.1 Installation of a 1 MW PV solar grid-connected solar plant	Quarterly project reports	0	2022	0	0	1	An unstable political situation may delay or stop the initiative
	3.2 Installation of 15 wind masts at recommended sites in Libya	Quarterly project reports	0	2022	0	1	2	An unstable political situation may delay or stop the initiative
	3.3 Post feasibility study project development reports	Quarterly project reports	0	2022	0	1	3	An unstable political situation may delay or stop the initiative

V. MONITORING AND EVALUATION

Monitoring and Evaluation will be conducted at several levels. The UNDP will be monitoring the progress of the implementation on a regular basis, and will be submitting quarterly progress reports on project implementation. UNDP will hold regular virtual meetings to be updated on the progress, challenges and results. In addition, supervision missions by UNDP will be conducted as necessary, subject to security considerations. An inception report will be submitted by the UNDP upon project launch, with detailed technical work plan, a simplified procurement plan, a simplified disbursement plan, as well as a monitoring template with indicators to be monitored and updated regularly. An independent consultant will be hired under the project to conduct an evaluation of the project, prior to its completion.

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator.	Slower than expected progress will be addressed by project management.	PIU	0
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	PIU, Project board	0
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	Once a year	Relevant lessons are captured by the project team and used to inform management decisions.	PIU	0
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform	Every 2 years	Areas of strength and weakness will be reviewed by project management and used to inform	PMU	0

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
	management decision making to improve the project.		decisions to improve project performance.		
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	Once a year	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	PIU, PMU	0
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)		PIU	0
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.	Once a year	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	PIU, Project Board	0

Evaluation Plan¹¹

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNSDCF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
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¹¹ Optional, if needed

Final Project Evaluation	UNEP	Energy	4.1 By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation	2024	NESDB, REAOL, GECOL, NOC	70,000 (Project funded)
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VI. MULTI-YEAR WORK PLAN ¹²¹³

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
Output 1: <i>National energy sector gender responsive policies and strategies are developed, implemented and publicly supported</i>	1.1: <i>Technical assistance, capacity building and outreach on national gender responsive energy policies, strategy, and reform implementation plans, at three levels of Libyan society is developed.</i> 1.1.1. High level technical assistance provision to the Energy Supreme Council, NESDB, REAOL, Gecol and other GoL bodies on energy strategy and policy 1.1.2. Energy sector issue awareness raising, consensus building and entry level capacity building for key government institutions. 1.1.3. Public outreach and convening a public forum on energy reform, policy, and strategy issues. 1.1.4. Fill capacity gaps through training and sensitization initiatives.	150,000	150,000	150,000	UNDP	EU	Multiple	450,000

¹² Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

¹³ Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
	1.2: <i>Technical assistance and implementation of Restructuring and Utility Unbundling Reforms (The unbundling of accounts) to the General electricity company of Libya is delivered.</i> 1.2.2. Based on new accounts, estimating of all costs for each business unit, capturing any changes in costs due to staffing and organizational changes resulting from unbundling, and conduct financial analysis to estimate payments between different business units. 1.2.3. Identify a date for transition to the new account structure (e.g., start of a new fiscal year) and adjust accounting software, accounting manuals, etc., necessary to support the new accounting system.	120,000	40,000	40,000	UNDP	EU	Multiple	200,000
	Technical assistance and monitoring	13,500	9,500	9,500				
	Sub-Total for Output 1	283,500	199,500	199,500				682,500
Output 2: National energy efficiency is improved across the building, cooling, heating, domestic appliance, industrial equipment, and heavy industry sectors.	2.1: <i>Technical assistance, capacity building and outreach for gender responsive lighting energy efficiency standard is delivered.</i> 2.1.1. Implement a National Market Assessment on Lighting in Libya 2.1.2. Development, drafting, submission, consultation, and finalization of the Minimum Energy Performance Standard (MEPs) and Labelling for LED and other lighting in Libya 2.1.3. Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.	80,000	100,000	0.0	UNDP+UNEP	EU	Multiple	180,000

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
	2.2: <i>Technical assistance, capacity building and outreach for building sector energy gender responsive construction codes delivered.</i> 2.2.1. Establishment of and capacity building for a cross sectoral Policy Working group for the development of Libya's Building Code. 2.2.2. Development, drafting, submission, consultation, and finalization of the building code 2.2.3. Guide development, training, and public and sector outreach to support implementation of the building code	90,000	100,000	0.0	UNDP+UNEP	EU	Multiple	190,000
	2.3: <i>Technical assistance, capacity building and outreach for gender responsive air conditioner energy efficiency delivered.</i> 2.3.1. Implement a National Market Assessment on Air Conditioning (ACs) in Libya 2.3.2. Development, drafting, submission, consultation, and finalization of the Minimum Energy Performance Standard (MEPs) and Labelling for ACs in Libya 2.3.3. Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.	80,000	100,000	0.0	UNDP+UNEP	EU	Multiple	180,000

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
	2.4: Technical assistance, capacity building and outreach on gender responsive domestic heating and appliances energy efficiency delivered. 2.4.1. Implement a National Market Assessment on water heaters, space heaters, washing machines and domestic appliances in Libya 2.4.2. Development, drafting, submission, consultation, and finalization of a set of Minimum Energy Performance Standards (MEPs) and Labelling for domestic heating and appliances in Libya 2.4.3. Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards	80,000	100,000	0.0	UNDP+UNEP	EU	Multiple	180,000
	2.5: Technical assistance, capacity building and outreach on industrial equipment energy efficiency delivered. 2.5.1. Implement a National Market Assessment on industrial equipment (electrical motors, pumps, boilers, fans, compressors) in Libya. 2.5.2. Development, drafting, submission, consultation, and finalization of a set of Minimum Energy Performance Standards (MEPs) and Labelling for industrial equipment in Libya 2.5.3. Guide development, training, public and sector outreach and market monitoring and verification to support implementation of the MEPs and associated labels, guidance, and standards.	0.0	300,000	300,000	UNDP+UNEP	EU	Multiple	600,000

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
	2.6: Support for the gender responsive LED lighting rapid upgrade project proposal implemented. 2.6.1. Securing a high-level government mandate and supporting development of a national working group and project team 2.6.2. Detailed project and finance development support (including co-financing the exchange scheme) 2.6.3. Post-financing detailed project implementation support	0.0	150,000	90,000	UNDP+UNEP	EU	Multiple	240,000
	2.7: Creation of a national Energy Efficiency laboratory and certification centre supported. 2.7.1 Scoping, design, siting, finance planning and team design for a national EE laboratory and certification centre. 2.7.2. Post financing equipment procurement support. 2.7.3. Post financing building construction/renovation and fit-out technical support. 2.7.4. Post construction team capacity building and laboratory launch support.	0.0	1,000,000	200,000	UNDP		Multiple	1,200,000
	2.8: Heavy industry energy efficiency upgrade projects supported. 2.8.1. Facility energy audits, upgrade plan development and financing search for 5 medium and heavy industry facilities 2.8.2. Post financing technical and project support for detailed implementation of EE upgrade projects for 2 facilities.	0.0	250,000	350,000	UNDP		Multiple	600,000
	Technical assistance and monitoring	16,500	105,000	47,000				
	Sub-Total for Output 2	346,500	2,205,000	987,000				3,538,500

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
Output 3. <i>Multiple large-scale gender responsive Renewable Energy projects are developed and financed to the construction ready stage in Libya.</i>	3.1: A 1 MW grid-connected PV solar power plant developed, installed, and handed over. 3.1.1. Preparing project development plan with REAOL & GECOL 3.1.2. Prefeasibility study 3.1.3. Feasibility study of the project + site identification includes all required studies for the site like geotechnical survey and etc.. +Technology selection 3.1.4. Project Implementation: Engineering, Procurement and Construction (EPC phase) 3.1.5. Commission the project and Develop capacities for Renewable Energy Authority of Libya (REAOL) 3.1.6. Establishment of a structured training programme for national experts, technicians, academics and students throughout the construction of the plant	50,000	1,610,000	1,500,000	UNDP		Multiple	3,160,000
	3.2: Fifteen (15) standard wind masts at recommended sites in Libya to promoting Utility Scale Power Generation from Wind Energy installed. 3.2.1. Preparing project development plan with REAOL & GECOL for establishment of wind measurement masts in fifteen(15) different locations 3.2.2. Preparation of bid documents including technical specifications of wind masts 3.2.3. Supply, Installation, Commissioning of fifteen(15) standard wind masts at recommended sites in Libya 3.2.4. Capacity building of the national experts and technicians from Renewable Energy authority of Libya (REAoL)	950,000	950,000	1000,000	UNDP		Multiple	2,900,000

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	PLANNED BUDGET		
		2023	2024	2025		Funding Source	Budget Description	Amount
	3.3: Early project development for multiple gender responsive solar projects supported. 3.3.1. Post feasibility study project development for the MMRA floating solar project 3.3.2. Post feasibility study project development for the MMRA eastern wellfield autonomy project 3.3.3. Post feasibility study project development for the Southwest Community Solar 1 project 3.3.4. Concept screening and development support for the REAOL project portfolio	50,000	350,000	325,000	UNDP + UNEP		Multiple	725,000
	Technical assistance and monitoring	52,500	145,500	141,250				
	Sub-Total for Output 3	1,102,500	3,055,500	2,966,250				7,124,250
Total for all Outputs		1,732,500	5,460,000	4,152,750				11,345,250
Project Management Costs	Audit and Evaluation	17,325	54,600	41,528				113,453
	Project Management Staff	400,000	500,000	500,000				1,400,000
	General Expenses (office, security, accommodation, etc)	150,000	200,000	200,000				550,000
	Vehicles and office equipment	100,000	150,000	150,000				400,000
	Other Direct Costs / Country Office Support	239,983	636,460	504,428				1,380,870
	Sub-total Project Management Costs	907,308	1,541,060	1,395,955				3,844,323
TOTAL DIRECT COSTS		2,639,808	7,001,060	5,548,705				15,189,573
Indirect Costs	General Management Services (GMS 8%)	211,185	560,085	443,896				1,215,166
	UN Coordination Levy (1%)	28,510	75,611	59,926				164,047
TOTAL		2,879,502	7,636,756	6,052,528				16,568,786

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The management of the project will be conducted by UNDP through direct implementation. UNDP will dedicate one project manager, technical experts and one project management/support staff, in addition to advisory and technical support from compliance and fiduciary units who will be conducting all project procurement and financial management under the project, in compliance with UNDP rules and procedures. UNDP Libya will cover the project costs donor and government contributions which will cover the cost of project activities and direct and indirect project costs.

UNDP will maintain close bilateral communication with Donors throughout implementation of the project. The project manager will continue to engage with the established Project Board as oversight and advisory authority. The bilateral relationship will facilitate collaboration between UNDP and the Donors for the implementation of the Project. The Donors will provide guidance and review implementation progress through narrative and financial progress reports, including work plans, and play an active role in the final project evaluation.

UNDP will also consult the relevant government Ministries and as needed, other interested stakeholders. This may include civil society organizations, private sector institutions and a number of international development organizations including other UN Agencies.

Project Implementation Team

Based on UNDP rules and regulations concerning DIM projects, UNDP Project Manager will be responsible for the overall administrative management and monitoring of the project progress. Project staff and advisors will be recruited in accordance with UNDP's policies and procedures and all project procurements will follow UNDP rules and regulations. The project will be implemented by UNDP following within its financial rules and regulations.

The project team will include a Senior Technical Advisor who will support the implementation of project activities and coordinate with project consultants, national stakeholders, and the other UN agencies.

The project implementation team will oversee the project's timely implementation and finalization.

The project will be supervised by a Project Board, comprised of one representative each from UNDP, UNEP, each donor and the Government of Libya, represented by the Ministry of Planning. The PSC will meet every 6 months. The Project Board will be responsible for oversight and act as an advisory authority, representing the highest body for coordination, strategic guidance, oversight, and quality assurance. The Project Board will be chaired and convened by UNDP and will meet at least once a year.

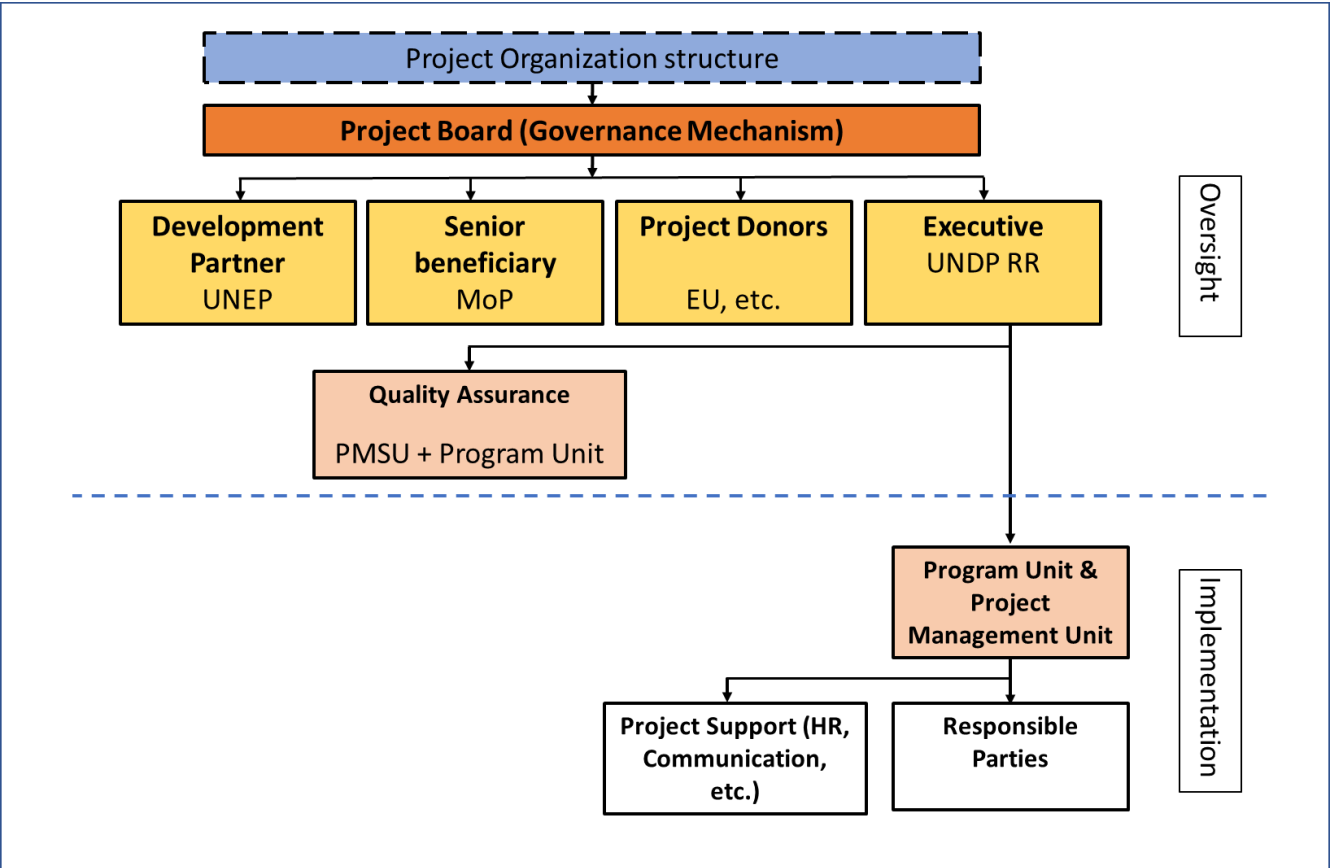
Delivery of the project components will be managed by the responsible parties, supported by a range of UN and non-UN partners. Specialized task teams, including key national stakeholders will be mobilized and then demobilized as needed.

Effective management of the Project will be critical, given its importance, size and complexity. To this end, UNDP will secure a high-quality project management system while ensuring risk management and project approaches sensitive to the conflict and political environment in Libya.

Cost Efficiency and Effectiveness

This Project will build upon existing partnerships including the ongoing work on the NDC and energy transition. As such the start-up time and associated costs of creating relationships with national actors and with hiring core programmatic staff will be reduced. The project has already assessed the contributions of national actors as well as their needs and coordinated its efforts with other partners that are involved in similar endeavours. To solidify its partnerships, UNDP will sign cooperation

MoUs with the Ministry of Environment, Ministry of Planning, Man-Made River Authority and renew its cooperation with the National Committee to Combat Desertification as well as the National Meteorological Centre. The project will leverage the efforts of other existing Country Office capacities and programming including the Governance Pillar and Peacebuilding, Resilience and Livelihoods project.



VIII. LEGAL CONTEXT

Where the country has signed the [Standard Basic Assistance Agreement \(SBAA\)](#)

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (20 May 1976). All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by UNDP in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

IX. RISK MANAGEMENT

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)
2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the project funds are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.
3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse (“SEA”) and sexual harassment (“SH”) allegations in accordance with its regulations, rules, policies and procedures.
6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social

and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient:
 - a. Consistent with the Article III of the SBAA [*or the Supplemental Provisions to the Project Document*], the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
 - i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
 - ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.
 - b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.
 - c. In the performance of the activities under this Project, UNDP as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or address SEA and SH.
 - d. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
 - e. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
 - f. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its

consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.

- g. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

- h. UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

- i. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.
- j. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
- k. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, *mutatis mutandis*, in all its sub-contracts or sub-agreements entered into further to this Project Document.

X. ANNEXES

- 1. Project Quality Assurance Report**
- 2. Social and Environmental Screening Template** [\[English\]](#) [\[French\]](#) [\[Spanish\]](#), including additional Social and Environmental Assessments or Management Plans as relevant. *(NOTE: The SES Screening is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences, preparation of communication materials, strengthening capacities of partners to participate in international negotiations and conferences, partnership coordination and management of networks, or global/regional projects with no country level activities).*
- 3. Risk Analysis.** Use the standard [Risk Register template](#). Please refer to the [Deliverable Description of the Risk Register](#) for instructions
- 4. Project Board Terms of Reference and TORs of key management positions.** The standard Project Board TOR can be found [here](#).