

United Nations Development Programme
Country: Nigeria
Project Document

Project Title: Access to Renewable Energy

UNDAF Outcome(s): All three outcomes under B.2: Equitable delivery of services for growth & employment un rural markets.

Expected CP Outcome(s): Scaled-up access to affordable and reliable renewable energy to offer off-grid power to MSMEs and potentially small rural and urban settlements

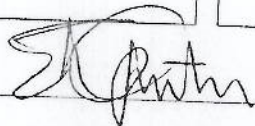
Expected Output(s):
(i) Scaled-up access to affordable and reliable renewable energy by MSMEs
(ii) Expanded base of private sector-based service providers targeting business and market development for MSMEs


Implementing Partner: Bank of Industry

Brief Description

The equitable provision of services for rural growth and employment is hampered by a lack of access to energy services. The Programme will intervene to promote and support an expansion of renewable energy services for rural MSMEs to support private sector-led economic development. Overall objectives of the programme are to build capacity in the business and financial sectors to incorporate renewable energy in business planning and development, and to support the evolution of renewable energy policy and public planning. The Programme will build the capacity of i) MSMEs to incorporate renewable energy either as a business in and of itself, or as service for business development; ii) financial institutions to better understand and assess the credit and financing risks of renewable energy investments and services; and iii) Government to develop and implement renewable energy policies and regulatory frameworks. The Implementing Agent, the Bank of Industry, is uniquely situated to access all three sectors necessary for success: Government, MSMEs and financial institutions.

Programme Period:	2010 - 2014	Total resources required	4,480,000 USD
Key Result Area (Strategic Plan): Development	Private Sector	Total allocated resources:	2,000,000 USD
Atlas Award ID:	00069702	UNDP Regular	2,000,000 USD
Start date:	November 2010	• 2011 & 2012:	1,150,000 USD
End Date:	October 2014	• 8 th CP	850,000 USD
PAC Meeting Date:	November 24, 2010	<small>**To be committed, upon availability of funds in the 8th country programme.</small>	
Management Arrangements:	NEX	Unfunded budget:	2,480,000 USD
		In-kind Contributions	
		• BoI (office space and dedicated team of at least two staff)	150,000 USD

Approved by Bank of Industry: 

Approved by UNDP:  Daouda TOURE

I. PROGRAMME SUMMARY

Introduction

The energy sector is of strategic importance to the Nigerian economy, and a major driver for growth. In addition to its macroeconomic importance, it also has a major role to play in reducing poverty, improving productivity and enhancing the general quality of life of Nigerian people. However, Nigeria is currently facing an energy crisis, with only 47% of the population having access to electricity, deficiencies in access to modern thermal and mechanical energy services, as well as insufficient public capitalisation of the oil and gas production. There is a risk that subsidised fossil fuels and electricity will push out investments in renewable energy sources and energy efficiency. There are important advantages to be gained from an increased access to renewable energy sources and services. In addition to offering an additional avenue and resource base for provision of energy services, negative environmental and health impacts can be greatly reduced.

Lack of modern energy services¹ is identified as one of the most important barriers for development and expansion of manufacturing as well as service industries. The fact that a large share of commercial and institutional electricity customers have invested in own generation through diesel and petrol generators, which are operating more similarly to base load than as backup, is a clear indication of the substantive commercial demand for modern energy services. Furthermore, the use of conventional fuels such as kerosene, wood fuels and agriculture residues for direct combustion is inefficient, polluting and expensive – these fuels can be utilised more efficiently to provide multiple energy services to MSMEs as well as public institutions and households.

There are ambitious plans for developing the energy sector, especially for renewable energy. The realisation of the long term targets would see an increase of operational electricity generation capacity from 3,500 – 4,000 MW to 190,000 MW, a fiftyfold increase. These plans also include targets for biofuels and cogeneration. However, the fact that these targets have remained the same for almost a decade without substantive actual increase in public energy supply indicates that new approaches are required.

Renewable energy supply options, e.g. wind, biomass, small hydro and solar, can be deployed to supply electricity to the national grid, replace diesel generators, or provide other energy services such as heating, cooling or mechanical power. The individual renewable energy options differ in their suitability to provide one or several of these energy services. These systems, however, are often characterised by perceived or real technical/operational risks, institutional barriers/risks and market/financial risks. There is a need for information and awareness as well as practical tools to assess and quantify these risks. There are also systemic aspects of seasonality and intermittency that need to be considered. Most renewable energy options are financially front-heavy when compared to fossil or traditional options, even if the lifetime cost can be lower, and there is need for financing and policy instrument to support investments in renewable energy resources.

Under the 2005 electric power sector reform act the NERC was established and the electricity sector went through an unbundling of NEPA into the PHCN. The unbundling has however only been partial as the generation, transmission and distribution companies are still owned by one single holding company. The regulation of electricity operators covers all activities of generation, trading, transmission, distribution and system operations which require a license. Activities which require a license are generation on excess of 1 MW, electricity distribution in excess of 100 kW, electricity transmission, system operation, trading

¹ In most circumstances the term "electricity" is often used synonymously with "energy", even though the actual energy services needs of the user include mechanical as well as thermal energy services (e.g. grinding, heating, refrigeration).

and electrical installation/wiring. A tariff reform is ongoing under which a tariff increase from today's 6 N/kWh to 8.50 N/kWh was announced for July 2010 and would be further increased to 10 N/kWh by 2011.

For the national electricity system, the installed generation capacity is close to 8,000 MW. The actual available capacity lies between 3,000-4,000 MW. The main reason for the much lower operational capacity compared to installed capacity is the deteriorated condition of many generating units as well as interruptions in gas supply. Total electricity generation in 2007 was 23.0 TWh, of which gas accounts for 67%, hydro 28% and oil 5%. The large-scale generation plants have an availability of 35%-50% due to lack of fuel, seasonal water flows and lack of maintenance. Electricity use in 2007 was 19.6 TWh, of which the residential sector accounted for 51%, while industrial and service sectors consumed the remaining. In addition to the public systems, almost all institutions and businesses use generators to secure their energy needs. Several IPPs have expressed their interest in investing in the power sector, and some 20 licenses have been granted for a capacity totalling close to 10,000 MW. At present none of these projects have been realised due to a combination of bureaucratic barriers and a single-buyer model with tariffs that do not reflect the full costs of new capacity.

Expanding access to renewable energy services in rural and peri-urban areas is associated with a number of challenges, and innovative approaches have to be considered. The ownership structure best suited for a certain service delivery model is dependent on the financial and social objectives of the intervention or venture, marketplace dynamics, client needs or capabilities, as well as legal and regulatory aspects. There is also a need for market- and impact assessments to be carried out to arrive at the correct setup at the individual project level.

The UNDP Access to Renewable Energy Programme focuses on increasing the national capacity to invest in- and utilise renewable energy resources to improve the access to modern energy services for MSMEs. These are the services many Nigerian MSMEs either lack completely or access erratically through the electricity grid which hampers their potential for growth.

Strategy

The overall strategic approach for the Access to Renewable Energy Programme stems from UNDP's objectives for pro-poor private sector and inclusive development in Nigeria. The UNDP Private Sector Strategy (PSS) priority areas 2-4 can be said to form a basis for support activities for MSMEs within the field of renewable energy. The PSS priority areas include facilitating pro-poor value chain creation, brokering investments in pro-poor goods and services and fostering inclusive entrepreneurship. Improvement of energy efficiency has not been considered as a separate objective under this Programme, but is implicitly included in most renewable energy investments to reduce capital costs.

MSMEs will be the primary beneficiary group for the outcomes of the Programme, while not necessarily for all activities included. The MSMEs need not only direct support and internal capacity but are also dependent on financial services and policies. The approach rests on three pillars that are deemed critical bottlenecks for the development of the MSME sector, particularly in rural areas:

- The lack of access to credit is a major barrier to investments, including in the entire value chain of renewable energy from primary resources through services provision and impacts. Of particular importance is the dissemination of financing and credit assessment tools suited to investments that include elements of renewable energy technologies or services, both from a supply and end-use perspective.
- MSMEs wanting to invest in, or access, modern renewable energy services lack the capacity to adequately assess and value options in terms of business planning and management. The knowledge about available options is low, including the understanding for how to approach different energy service requirements in an integrated and cost-effective manner. There is a need for support and capacity development on business planning that considers renewable energy services as more than a stopgap solution in the absence of electricity.

- Renewable energy policy and planning lack an institutional home in the Government system at the same level as electricity and petroleum/gas. Individual States are taking a lead in promoting renewable energy interventions, but there is a need for a forum for policy dialogue and advice within which experiences and practices can be shared and improved on.

The high cost, and widespread use, of petroleum-fuelled generators constitute one important business opportunity for offering alternative sources of energy services. Another important opportunity is agro-processing business where a range of energy services are required for grinding, milling, drying, heating and refrigeration for which integrated solutions based on renewable resources is substantially more suitable than either grid electricity or stand-alone generators.

Within the overall framework of increasing access to modern energy services the strategy for the Access to Renewable Energy Programme comprise three outcome areas:

1. Foster pro-development energy services by facilitating an expansion of renewable energy services accessible to MSMEs
2. Support renewable energy investments by building up capacity within the financial sector as well as among users and providers of energy services
3. Promote policies and institutional frameworks for an inclusive renewable energy market development

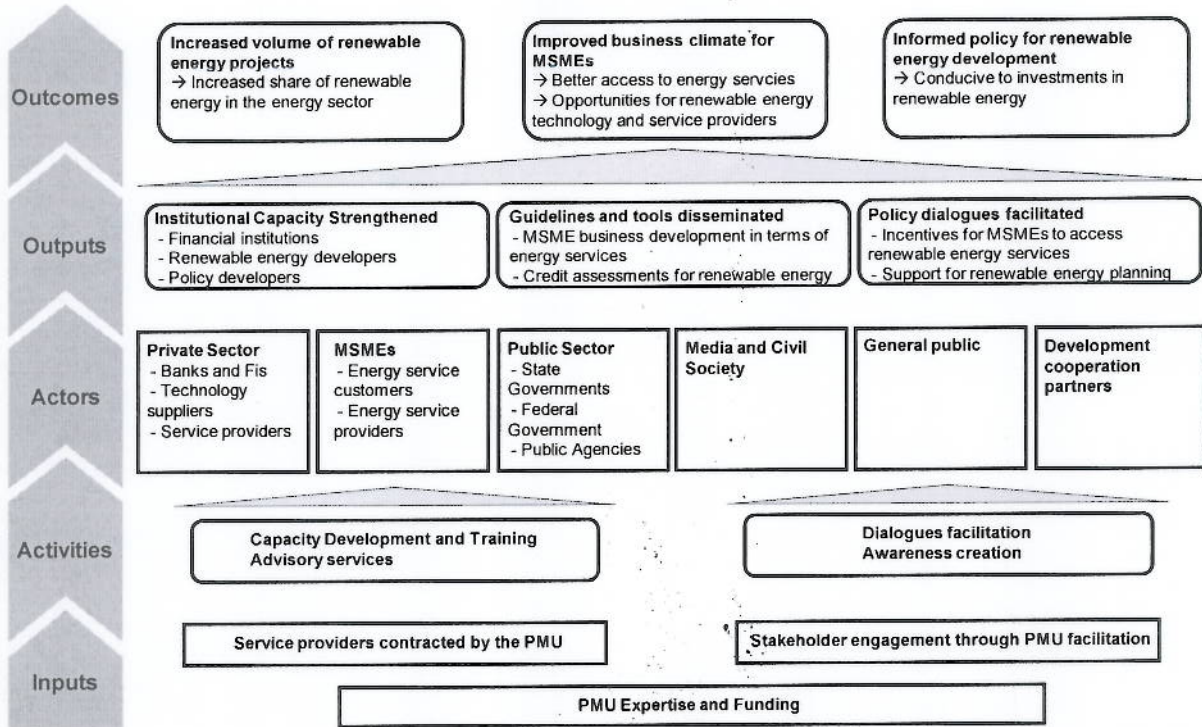
The strategy is intended to give practical direction and substance to the activities under the Access to Renewable Energy Programme. The Programme interventions have a specific focus on MSME's in order to emphasise pro-poor private sector development. Household-level access to modern renewable energy services is indirectly targeted through i) the development of commercial and institutional energy services providers; and ii) the improved business climate arising from increased access to energy services that can provide jobs and indirect economic and social benefits.

The rationale for appointment of the Bank of Industry (BOI) as Implementing Agency, and the establishment of the Programme Management Unit (PMU) within BOI includes:

- The BOI's standing as having direct access to the MSME sector (a core focal area), the financial sector as well as the Government sector will be critical for the successful execution of the Programme.
- MSME sector well understood and substantive portfolio of projects already existing, and services not limited to lending but also business development services.
- Substantive existing capacity in investment and credit assessment.
- Experience in renewable energy financing and development, and a mandate to expand this part of the operations.
- Large geographical reach.

Programme implementation overview

In the below figure, an overview is presented to show the interrelationships between different aspects and components of the Programme. This overview is schematic and for the sake of clarity does not include all the interactions between actors, activities and outputs etc.



Schematic presentation of the Programme

II. RESULTS AND RESOURCES FRAMEWORK

Outcome	Output	Role of partners ²	Estimated aggregate budget requirement (USD, over 4 years)
1. Improved access to reliable and renewable energy service options for MSMEs.	1.1. Increased number of renewable energy projects realised/under development	State and Federal Government agencies are key to support, approve and license (as appropriate) development of energy services. World Bank and USAID are important partners for the harmonisation of support to MSMEs in the area of energy.	PMU staff and consultants costs: 1,700,000 Programme office costs: 200,000 Administrative costs: 100,000 Travel costs: 200,000
2. Developed capacity of stakeholders to facilitate invests in the renewable energy sector.	2.1. Training and capacity building for project developers. 2.2. Training and capacity building for finance institutions. 2.3. Capacity development and support for public policy formulation and development at Federal and State level. 2.4. Guidelines and tools based on best practise developed and disseminated	UNIDO, World Bank, USAID and others have access to expertise that can be brought to bear. In addition, public institutions, MSMEs, finance institutions, project developers and technology and service providers need to actively engage in the process.	Administrative costs: 200,000 Travel costs: 300,000 Outreach and dissemination: 40,000 Training programmes and consultants costs: 1,400,000
3. Policy level dialogues established and maintained	3.1. Dialogue to influence renewable energy policy development. 3.2. Dialogue to support renewable energy planning	State and Federal governments are key. Cooperating partners to be invited to participate.	Administrative costs: 80,000 Travel and meeting costs: 160,000 Consultants fees: 100,000
		Total	4,480,000

² UNDP and BOI are considered as implementers, partners are external.

III. OUTPUTS AND ACTIVITIES

Establishment of the UNDP Access to Renewable Energy Programme

The Programme is proposed to begin in November 2010, and will be implemented by the BOI in its role as Implementing Agency. The Programme is part of the UNDAF II 2009-2012 Country Programme Action Plan (CPAP) already agreed with the FRN. Given the Programme's time frame of four years (2010 – 2014), the full execution of the project will straddle two UNDAFs, subject to the normal provisions of review and agreement between FRN and the UN.

The following key activities will be implemented during the first six months of the Programme in order to physically and institutionally establish the PMU:

- Formalise the agreement between UNDP and the implementing agent (BOI), which will be the responsible for channelling funds to activities and the day-to-day operations of the programme. The implementing agent will also be responsible for activities in the field
- Recruit or appoint appropriate personnel
- Find a suitable location for the PMU and make practical arrangements for management, staffing and office space.
- Approve and if necessary adjust the institutional setup of the PMU. Confirm and adopt the proposed strategy for the PMU with objectives, responsibilities/tasks, and reporting structure
- Perform an initial capacity assessment of target groups, initiate capacity building activities as well as develop capacity building plans going forward
- Establish a reporting system aligned with necessary supporting software
- Establish a budget control system, procurement routines and secure necessary auditing arrangements according to UNDP Standards, or HACT for Implementing Agency

Since BOI is the Implementing Agency, the PMU will be physically located at the BOI Head Office, with the option of having a distributed PMU across Zonal Offices. There need to be frequent and regular meetings and interactions with stakeholders and partners, as the Programme is national in its scope.

Roles, responsibilities and resources

The BOI will have the overall responsibility and mandate to implement the Programme through the PMU. The activities and outputs generated under the Programme should be disseminated to relevant recipients through the BOI network and partnerships, thus multiplying the reach of the PMU. The BOI will also manage the funds allocated to the Programme, and ensure that the PMU has adequate systems and routines for accounting, reporting and auditing. The BOI should be given non-exclusive intellectual property rights to outputs from the Programme to strengthen its own operations at the same time as the Programme is building the capacity of other actors.

The UNDP, being the key principal of the Programme, shall have full insight into the operations of the PMU and have access to continuous performance and accounting reports. Furthermore, the UNDP should leverage its standing to drive the policy dialogues as well as coordination efforts with other development cooperation institutions as deemed relevant. Finally, UNDP should take the lead in fund-raising activities to secure matching funds required to implement the programme in its entirety.

The staffing of the PMU itself, in terms of permanent staff for the duration of the programme, should be limited to 3-4 professionals, of which one is the Programme Manager. Due to the broad scope of the different activities, it will not be possible to fund a permanent team with all the required competences. The core team should include senior professionals in development finance, capacity development, renewable energy and energy policy and/or regulation – and the programme manager should be an established professional in one or several of these areas. As the PMU will have to keep several parallel processes moving, it is

imperative that all core team members are capable of independently managing complex processes.

The core team staff can either be recruited for specific time-limited contracts, or be seconded from e.g. BOI for the duration of the programme.

The PMU should expect to have reasonable autonomy and flexibility in the executing of its duties while still being accountable to the Programme Board and the BOI – to which it also should be reporting on progress and issues at regular intervals. The PMU will also be responsible for producing annual performance and other reports for publishing.

Programme Management

It has to be well understood and agreed upon that the plan serves as a comprehensive blue print for implementing each component of the support program and has to be adhered to. As the support program is to be implemented over a four year period, one has to make detailed plans for activities, their sequence and expected results in order to ensure consistency and result oriented progress.

To make sure that the work plan does not become obsolete and outdated, there must be procedures in place to update and adapt the document as required. Such procedures could include for instance an annual review informed by the M&E activities detailed below. The key activities to be implemented for the establishment of a work plan are the following:

- Approve and if necessary adjust suggested activities, outputs, objectives and indicators defined in the work plan
- Approve and if necessary adjust suggested milestones and schedule for deliverables
- Approve and if necessary adjust suggested resource requirements and budget for each activity
- Establish and implement procedures for a regular/annual update of the work plan

The same careful attention must be given to the selection of the types of projects which will receive support from the Programme. There should be a balance between micro, small and medium size projects. Also, a range of alternative resources and services should be represented, although some are more mature and ready to be taken to the market than others. Finally, given the diversity in available service delivery models, there should also be a variation of these represented in the program in order to collect valuable lessons learned et cetera. Support to specific interventions must also be balanced against the time and resources needed for engaging with, and influencing of, the policy development and implementation process.

The key activities to be implemented in order to select priority states and develop selection criteria for projects to be supported are the following:

- Carry out consultations and interviews with key stakeholders including local authorities in order to determine selection criteria for the choice of priority states
- Identify priority states in which the UNDP support program can contribute the most according to established criteria that will include, but not be limited to:
 - UNDP preferences for focusing resources on states with existing UNDP programmes that can create synergies (e.g. renewable energy and agriculture)
 - Potential for quick wins by supporting project developers and State Governments who are articulating funding proposals for investment support and TA (e.g. provide early support for actors who are entering into discussion with the World Bank for financing under the new energy programme)
 - Synergetic interventions where BOI is supporting MSME clusters or sectors (e.g. provide policy advice and support to State Government and renewable energy expertise to expand renewable energy components in upcoming BOI credits)
- Define criteria for selection of types of projects to be supported by the program in the selected priority states, of which the following are key:

- Initiatives that have strong potential for replicability to ensure that new products or services developed and deployed can be institutionalised and sustained
- Technology neutral (i.e. the energy service developed is the measure of success) while at the same time not engaging in piloting new or commercially unproven technologies
- Renewable energy sources and services that can combine economic, social and environmental benefits
- Encourage initiatives that have a potential for adding substantive local content, or developing expertise in which Nigeria can become a regional leader

It is of utmost importance that the program activities and achievements are regularly monitored and evaluated (M&E). This is in order to make sure that the intended goals have been achieved, but also to detect problems and unexpected outcomes as soon as possible. Although a generic approach to M&E can be applied, each M&E program has to be tailored to the specific situation, taking the actual activities and performance targets into account.

The Results and Resources Framework (RRF), as well as a detailed work plan for the first year, will form the core of the Programme Document. The RRF also includes baselines which serve as a starting point and determines the current condition against which future change can be tracked, and indicators for what should be achieved when the activities have been performed. Hence, the baseline and the indicators constitute the framework against which the project is to be evaluated. The monitoring process will measure the results while the evaluation process will compare the results with the established indicators.

A more in-depth description of the management arrangements, including partnerships and external expertise aspects, is found in Section V below.

Individual activities to realise outputs under the three outcomes will not be linear sequence, as the activities are intended to be mutually reinforcing and carried out in parallel. The outputs will be explained in more detail below. For each output, there is a description of the rationale behind the stated objectives, and the necessary activities to be implemented in order to achieve the stated output – as well as the required resources.

Outcome 1: Improved access to reliable and renewable energy service options for MSMEs

The core part of the program aims to ensure that MSMEs get improved access to reliable and renewable energy options, both in the short- and in the long term. A key objective of the programme is to catalyse and support interventions that have the potential to grow and expand, as well as act as examples and guidance to a broader national development process. The end result of this outcome is a portfolio of renewable energy service investments and initiatives that have clear ownership are adequately funded and can be promoted as good examples.

There is one output under this section:

- Output 1.1: Increased number of renewable energy projects realised/under development

It is acknowledged that the UNDP Programme does not have the capacity, or even its main strength, to be the funding agency of investments. What is widely accepted is that the comparative advantage of the UNDP lies in its access to government, its ties to funding agencies and the current related programmes with the Bank of Industry, value chains development in agriculture and UN bodies like UNIDO and UNEP with technical capability to support project-level development.

Output 1.1: Increased number of renewable energy projects realised/under development

Under this output, the UNDP Programme will act as a node and clearinghouse for renewable energy project developers, MSME clusters, MSME support schemes and energy sector interventions. The aim is to bring to bear partnerships, knowledge, policy level input and external technical expertise to help projects and ventures in their early stages of development to move ahead. It is not foreseen that the UNDP will be the sole, or even main, sponsor or supporter of individual investments projects. However, the recommended Implementing Agency, Bank of Industry, has the financial capacity, mandate and experience with MSME lending and business development support to act as the main sponsor. Practical PPP arrangements and models will be of special interest in this regard, as the program is based in the public sphere and aims to engage with private sector actors, both directly and indirectly.

The UNDP Programme is, in this sense, intended as a catalyst and a facilitator to bring together financial and on-the ground capacity to implement individual projects and programmes. The target for this output is:

- Investments in projects have resulted in a portfolio of activities that increase access to renewable energy services for MSMEs. A pipeline of projects submitted for evaluation at the financing stage should be the mid-point result in year 2 of the Programme, with full implementation underway at the end of the Programme.

Specific early activities to be undertaken under this output during year one include:

- 1) Establishment of the UNDP Programme Implementation Unit within Bank of Industry.
- 2) Offer to support the project proponents interested in applying for other financing in the development of business plans and operational capacity through technical assistance or invitation to MSMEs and banks to participate in activities specified under outcome 2 to increase their capacity to tap financing and assistance for renewable energy service access expansion
- 3) Development and marketing of PPP arrangements and models that can bring together BOI /other commercial financing, project developers and technology providers.
- 4) Development and dissemination of tailored information material and awareness raising activities to both solicit participation and buy-in into the programme activities and raise the general level of awareness about renewable energy options and opportunities.

Outcome 2: Developed capacity of stakeholders to facilitate invests in the renewable energy sector

This second part of the program activities and outputs cover the preparation, implementation and following-up of the training and capacity development programmes. The overall objective is not only to provide training, but to build institutional capacity and also to develop and disseminate services and products, tailored to be accessible and useful to MSME and renewable energy, which can be used by developers, financiers and technology/service providers. There are four outputs:

- Output 2.1: Capacity development for project developers
- Output 2.2: Institutional Capacity development for relevant financing institutions and frameworks
- Output 2.3: Capacity development and support for public policy formulation and RE development planning at both the Federal and State levels
- Output 2.4: Guidelines and tools based on best practise developed and disseminated

The first two outputs are analogue though different in content. They are intended to provide practical guidance and capacity on development and financing of renewable energy services. Due to a low general level of awareness about renewable energy options, all outputs will also include elements of awareness creation. This will include both technical-level awareness for

developers, financiers and policy makers as well as more general, jargon-free material produced for the media and general public.

Output 2.1: Capacity development for project developers

A key component of the support program is to build capacity for selected RE project development. This will include strengthening the capacity of or groups/clusters of MSMEs, in order to improve the skills and thereby contribute to increased investments in renewable energy. Many MSMEs are dependent on expensive and polluting diesel generators to provide electricity to their business operations. This fact underlines that there is an existing and strong willingness to invest in energy solutions in the market. Given the poor state of the power sector and limited access to stable energy services provision, it is suggested that MSMEs can invest in alternative energy services either directly (as developers) or indirectly (as customers).

Building on this background, the objective of Output 2 is to develop a detailed training and outreach program and implement it, tailored to the needs of project developers and groups/clusters of MSME energy users. This means that there are three broad categories of MSMEs to be targeted:

- Developers of energy services provision
- Secondary investments in own supply to ensure energy security
- Individual or groups of energy service users

In order to make the programme as effective and efficient as possible, one first has to assess the existing capacities of project developers in the field of renewable energy. The foundation for which capacities to build on has to be identified and analysed. Tools which can be used include surveys, focus groups or interviews with individual MSMEs. A clear focus should be kept on targeting both MSMEs which have started developing, or at least have a notion of what could be done within the field of renewable energy options, and those which have not yet considered the opportunities renewable energy services can offer to their business. The first group will need a different kind of support than the second group. For instance, the latter group may be in greater need of meeting places, training activities and contacts/partners than the first group.

Based on the assessment of existing capacities, the next steps are to perform a training needs assessments and conduct a gap analysis. The objectives are to identify the level of knowledge and skills necessary for project developers to actively access and initiate their own investigations of renewable energy options, and in which areas training activities are needed. As far as possible, local experts should be engaged to provide such knowledge and skills development support with the dual objective of ensuring context-specific relevance as well as long-term development of the national competence base.

Based on the gap analysis performed, the content of the training program can be determined. Typically, topics such as basic characteristics of various renewable energy technologies, market dynamics and alternative service delivery models need to be covered. In addition, how to develop a successful business plan and how to achieve financing will very likely be key issues to cover.

The following list of potential topics is meant for illustrative purposes. The final selection of topics will depend on the results of the training needs assessment and the gap analysis activities performed above. It is suggested to organise the workshops following main categories, with sub-headings indicating separate training sessions (this programme is initial and tentative and will be adapted to the evolution of the Programme):

1. Introduction to renewable energy options;
 - a. Presentation of the range of renewable energy options, their characteristics and what services can be provided – and what parts of the value chain can be procured locally (including services or components)
 - b. Presentation of technical considerations

- c. Presentation of the economics of renewable energy options, including a discussion on opportunities and limitations for MSMEs
2. Introduction to the renewable energy markets;
 - a. Presentation of distributed supply approaches and their associated design processes
 - b. Presentation of energy demand and markets in Nigeria, including discussions on how to conduct energy demand and market assessments (including own demand)
 - c. Presentation of energy market policies and current barriers and incentives for renewable energy investments
 - d. Presentation of international best practice, case studies and successes, including lessons learned applicable to the Nigerian context
3. Awareness and outreach to energy users on providers of renewable energy services and options available for users.

Step one in the activities to be performed includes the planning and the development of the workshop program, as mentioned above. Given the analysis of which skills and knowledge needs to be improved, one can develop a set of specific learning objectives which will guide the workshop program design and content. The result of these activities is a detailed plan based on careful attention given to project developers and programme partners existing knowledge and needs, detailing content and sequence of workshop sessions.

Finally, it is critical that training sessions as concrete and constructive as possible, and materials which the participants can bring home have to be developed and disseminated in an easy language and with clear key messages.

Key activities to be performed in the initial planning phase include the following:

- Assess existing capacities in the field of renewable energy
- Conduct a training needs assessment in order to ensure effective priorities and program design
- Perform a gap analysis and specify learning objectives
- Identify potential for supporting the development of local components/services in the renewable energy value chain
- Approve and adjust workshop program with priorities and workshop materials tailored to the needs of project developers
- Create a procedure/system for updating the workshop plan, adjusting the content based on demand and requests from the project developers

Based on the detailed workshop/training plan for selected project developers and MSME user clusters, the next step is to start implementing the training activities in the priority states identified in output 1. In order to ensure a broadest possible reach of the workshop activities, it will be important to conduct activities not only in the central areas of the country but also in rural and peri-urban areas. It is foreseen that the regional offices of UNDP and the Implementing Agent will be important as collaboration partners in facilitating the training activities which take place outside the central areas. Key activities to be performed in the implementation of the workshops include the following:

- Determine time and place/location for workshops, including whether to involve external consultants (make sure presentations/workshop materials are ready for use)
- Carry out information activities, for example through business associations, media and other channels, to inform potential beneficiaries of the opportunity, and solicit applications for participation in the capacity development activities
- Send out invitations to participants in workshops
- Conduct the workshops in an interactive and engaging manner
- Compile the material and results of the workshop and disseminate to the participants
- Follow-up the workshop with a survey where the participants evaluate the programme, both in terms of content and performance, and concerning how relevant it has been to their daily work.

Output 2.2: Institutional Capacity development for relevant financing institutions and frameworks

In order to stimulate renewable energy investments, targeted capacity building activities must also be performed for actors in the financial sectors. The relatively limited capacity at present has been identified as a barrier that needs to be overcome. In order for creditors to understand how to evaluate business/investment opportunities in the field of renewable energy, they not only have to understand and be updated on the energy market as such, but more importantly understand how access to alternative and renewable energy services impact businesses in terms of financial flows, cost structures, and – at the end of the day – short- and long term profitability.

The objective is to ensure that the relevant financial institutions and their staff have the required knowledge and skills to:

1. Evaluate business plans from both energy sector project developers and MSME businesses in terms of renewable energy services and investments.
2. Develop tailored financial products and services that incorporate, or focus on, renewable energy services for MSMEs.

The target group for this activity includes, but is not limited to:

- Bank of Industry
- Commercial banks
- Rural/development banks

By using the same procedure as for developing a plan for the capacity building and training program for the project developers described in output 2, one will end up with a detailed workshop plan and workshop materials tailored for finance institutions and their needs. The same tools are used for assessing existing capacities in the field of renewable energy (surveys, focus groups and interviews), and identify learning objectives based on a gap analysis.

The following list of potential topics is meant for illustrative purposes. Some topics will be similar to the ones suggested for the project developers but are of an introductory nature. The final selection of topics will depend on the results of the training needs assessment and the gap analysis activities performed above. It is suggested to organise the workshops following main categories, with sub-headings indicating separate training sessions:

1. Introduction to renewable energy technologies and services;
 - a. Presentation of the range of renewable energy technologies, their characteristics and how these technologies deliver energy services for different energy needs
 - b. Presentation of the economics of renewable energy technologies and services with an emphasis on opportunities and limitations for MSMEs
2. Introduction to the renewable energy market;
 - a. Presentation of distributed vs. centralised approaches and their associated characteristics
 - b. Presentation of renewable energy service delivery models
 - c. Presentation of market players and their business logic, their strengths, weaknesses, opportunities and threats (SWOT)
 - d. Presentation of customers, their segmentation and targeting
 - e. Presentation of energy demand and markets, including discussions on how to conduct energy demand and market assessments
3. Introduction to the structure of the renewable energy market
 - a. Presentation of institutional features such as balance provider, guarantees, and permits.
 - b. Presentation of energy market policies and current barriers to renewable energy investments

- c. Presentation of international best practice, case studies and successes, including lessons learned applicable to the Nigerian context
4. Training on specific appraisal modules for renewable energy financing;
 - a. Presentation on how to identify a sound business plan, including the key components and preferred structure
 - b. Presentation of renewable energy financing options, including carbon finance
 - c. Presentation of critical success factors and risks in the implementation of business plans involving renewable energy
5. Training for cost and risk assessment and portfolio management;
 - a. Presentation of methods for credit risk assessment of renewable energy projects including how to determine price risk, volume risk, volatility and the “peak” problem.
 - b. Presentation of renewable energy financing options, including descriptions of banking, innovative finance and carbon finance
 - c. Presentation of bidding documents and legal agreements such as Power Purchase Agreements, including issues related to structure, risk sharing and tariffs
 - d. Presentation of critical success factors for renewable energy investments, including overall viability and feasibility by using real life examples

Similar to output 2 described above for developers and user groups, the initial step is to plan and develop a tailored program for the finance institutions. These steps are important to coordinate with other implementing agencies and collaborating partners in order to assess the real knowledge gaps and needs. Key activities to be performed to achieve this output include the following:

- Assess existing capacities in the field of renewable energy services, making distinctions between what can be procured/utilised locally and what needs to be sourced from outside the country
- Conduct a training needs assessment in order to ensure effective priorities and program design
- Perform a gap analysis and specify learning objectives
- Develop workshop program with priorities and workshop materials
- Conduct awareness raising and information campaigns highlighting the objectives to make credit lines for private renewable energy investments available. This should be focused on suppliers/vendors of related goods and services, industry associations and broader media in the form of press releases or interviews.

Based on the detailed training plan for selected finance institutions, the next logical step is to start implementing the training activities. As for the workshops and training activities for project developers, it will be important to perform activities geographically spread out to ensure a broad impact on the ground. Also, the regional offices of UNDP will be important collaboration partners.

Key activities to be performed in the implementation of the training program include the following:

- Determine time and place/location for activities, including whether to involve external consultants (make sure presentations/workshop materials are ready for use)
- Conduct the training and outreach activities in an interactive and engaging manner, and compile the material and results to be disseminated to the participants
- Follow-up with a survey where the participants evaluate the programme, both in terms of content and performance, and concerning how relevant it has been to their daily work.

Output 2.3: Capacity development and support for public policy formulation and RE development planning at both the Federal and State levels

In order to truly have an impact and to ensure sustainability it is critical that the State Governments are included from the outset. There is also a need for technical assistance and advisory services to be provided at the State level. There are two main objectives of this Output:

1. Prepare and support State Government in identifying opportunities and options that have potential high impact and high chance of success. Also, public cost implications need to be addressed in a transparent manner.
2. Provide capacity support to internalise processes and policies for supporting renewable energy development in the long term

The detailed activities to be implemented will vary between States, as they are at different levels in terms of capacity and interest. Broadly, the support offered to the states should cover the following:

- Analytical and advisory services through limited technical and financial grants³ to states, or state-supported MSME clusters or industrial estates. These services can include initial case studies of options development and pre-investment assessments of renewable energy options that are suitable for meeting identified needs.
- Capacity development support for upstream phases of renewable energy programmes such as supporting the Government (both State and Federal) to assess cost implication of developing existing or new potential renewable energy sites and help present such for financing.
- Support in developing information material for the broader public to explain, in a jargon-free format, the opportunities and options available for renewable energy at both the State and Federal level.

These two activities should ideally be harmonised with financing programmes or credit facilities that will benefit from additional early studies and assessments to improve proposals and business prospects.

The internalisation of processes for policy formulation and promulgation will include a capacity building component that will support and reinforce existing policy where appropriate, and guide the formulation of new ones. Key in this process is to encourage knowledge exchange in the upstream phase of a policy cycle, enhancement of operations downstream and monitoring of implementation.

Output 2.4: Guidelines and tools based on best practise developed and disseminated

To compile best-practice in the field of renewable energy concerning both business models and markets will facilitate information dissemination and shorten the time for a first response on enquiries from MSMEs interested in generation business. By developing such guidelines, a comprehensive work can be done once for all and then updated when necessary. This will require a substantial initial work, but will be time saving in the long run. Instead of re-inventing the wheel each time recommendations are demanded, a well designed and all-inclusive set of documents can provide the relevant information.

The documents should include, but don't have to be limited to, the following key topics:

1. *Renewable energy services primer*. This should include an overview of renewable energy technologies and services, including features and recommendations on suitable applications. It should also include a contact database for local vendors and experts who can be contracted to implement or advise on various sections of the full renewable energy value chain.
2. *Overview of relevant actors on the market for renewable energy*. For MSMEs interested in renewable energy service operation, a market overview of relevant actors is crucial. This should include already established suppliers of renewable energy services, as well as a projection of potential demand.

³ The sequencing of such interventions needs to be harmonised with the availability of matching funds.

3. *Delivery models.* Overview of which service delivery models are relevant for MSMEs, e.g. sales to the grid, to bulk purchasers or through local retail, both from a supplier and user perspective.
4. *Guide to Business Plan.* Since MSMEs are likely to be entering the renewable energy and energy efficiency market for the first time, a guide to how a business plan should be developed should be provided in the guidelines.

To achieve this, the following actions need to be undertaken:

- Mapping of renewable energy technology and their respective features
- Analysis of how different technologies have the possibility to increase energy- and cost efficiency for MSMEs engaged in different sectors
- Assessment of different delivery models
- Compiling the different parts to be included in a business plan and provide generic example of costs and analyses
- Disseminate documents to relevant stakeholders in the renewable energy sector
- Develop and disseminate information material intended for the media as well as the general public

Outcome 3: Policy level dialogues established and maintained

In order for experiences and knowledge to be translated into replications of interventions as well as into informed policy development, it is critical that there is a platform for private and public actors to engaging directly. The ultimate objective is that these dialogues will foster understanding of issues, and ensure that policy, regulation and planning will benefit from this exchange. There is of course no guarantee that these exchanges are fulfilling all their objectives as it depends on the individual actors' willingness to engage. However, even communication of issues and problems within the current system can and should be internalized in the policy development process. The ultimate objective of this output is:

- Public-private dialogues result in improved relevance of public policies to support renewable energy investments, and private actors are better informed about existing support schemes.

The above objective will be the point of interaction for the MSME sector to, through the UNDP Programme, provide input and advice to the policy development and planning process. Overall, the combination and successful implementation of these outputs have as the ultimate objective to institutionalise renewable energy services as an integral and natural part of the energy sector.

The overall objective is to achieve the following:

- 1) Place the development and availability of renewable energy services on the same level as petroleum and electricity when it comes to national energy policy. One specific objective should include making the national energy policy technology-neutral. If this can be achieved it will constitute a major shift in how energy is viewed from petroleum and electricity to an energy services perspective.
- 2) Support and promote the implementation of support schemes specifically targeting the development of domestic renewable energy resources, as well as a systematic approach to supporting the development of a national renewable energy business sector.

It is recommended that the first activity should be a high-level interaction with NEC to ensure top-level buy-in and support. Without this, any attempts to engage in the policy development process is likely to fail. Given the situation at the time of such an engagement, there need to be flexibility on the part of the Programme to adapt to changing realities, while not compromising the overall objectives of the Programme.

There are two outputs under this outcome:

- Output 3.1: Dialogue to influence renewable energy policy development
- Output 3.2: Dialogue to support renewable energy planning and strategy development

Output 3.1: Dialogue to influence renewable energy policy development

For the UNDP support programme to be successful, it must identify potential partners such as project developers, investors, renewable experts, technology providers and public sector actors. There is a broad range of potentially relevant partners for the support programme which can assist with the preparation and implementation of various components and activities. This list includes, but is not limited to, the following

- Federal Government and its institutions
 - Bank of Industry for financing solutions
 - Ministry of Power, NERC and ECN for policy, regulations and sector planning
 - PHCN for the operations of the energy systems, including IPP issues
- State Governments and their institutions
 - Recommended primary focus on the so-called “UN States” to add coherence and synergies to the overall UNDP country programme
- Business associations comprising MSMEs in manufacturing, agro processing and services
 - These organisations provide a good platform for outreach to a wide array of individual actors
 - Individual organisations and companies, who are the primary target group for the UNDP programme, will be key to bring on board from the outset
- Bi- and multilateral development cooperation financiers
 - Pooling of resources and avoidance of duplication of efforts is key in this programme
- Trade councils, chambers of commerce and foreign embassies
 - These organisations provide an interface to foreign technology, know-how and investors

The key activities in order to identify and choose relevant and long term partners are the following:

- Apply selection criteria established under output 1 to identify project developers and user clusters eligible for early support actions (rapid establishment of a project pipeline)
- Establish expert pool for the provision of specific, on-call interventions on e.g. business planning, market assessment, project finance, technology selection and sizing, impact assessments, etc.
- State- and federal level public agencies informed and invited to participate in programme activities as appropriate

Furthermore, it is key to coordinate the UNDP support programme activities with relevant existing initiatives ongoing in the energy sector. The goal is to build on and strengthen ongoing processes, create synergies and maximise the impact of the programme. There are several initiatives implemented by public actors, multinational organisations as well as bilateral development agencies which are closely related to the renewable energy sector which have to be coordinated with the developments in the UNDP support programme, such as:

- The processes of tariff reform and development of feed-in-tariffs led by the federal government needs to be followed closely.
- The UNIDO programme for development of small hydro and biomass needs to be kept informed and vice versa.
- Other multilateral programmes, most notably the World Bank energy programme, but also the IFC energy portfolio in the country.
- Bilateral cooperation programmes of relevance, most notably the programmes on energy sector development (USAID) and private sector development (GTZ).
- State-level energy sector development plans need to be followed in the states where UNDP plans energy sector activities.

- Industrial and commercial development in key areas and sectors need to be screened from the perspective of this programme.

It is recommended that the UNDP takes the initiative and invites potential collaboration partners, both national and international, to coordination meetings at least once per year. This is important in order to ensure complementarities of activities and to achieve best possible impact of the support program. The key activities to be performed in order to achieve necessary coordination include the following:

- Conduct a detailed mapping of similar support programs within the field of renewable energy offered by other institutions, with a focus on identifying and comparing target groups, content, methods and duration of support activities
- Define potential synergies and overlaps to guide UNDP program development
- Invite cooperation partners to a dialogue meeting to discuss collaboration/coordination efforts of activities
- Establish and implement interaction and coordination tools in order to maximise synergies and impact of UNDP support program.

Output 3.2: Dialogue to support renewable energy planning and strategy development

The aspect of planning involves two distinct but related issues:

- 1) Conduct advice and advocacy activities to promote establishing an institutional home for renewable energy (as opposed to electricity) within the formal government structure
- 2) Supporting ambitious, but realistic, planning and strategy processes where targets are set against which a responsible entity is evaluated.

In order to promote and support realistic and implementable plans and projections there is a need to establish, or appoint, a responsible entity within the federal government that can be held accountable for planning and act as a node for soliciting support and input in the planning process. It is currently not clear where the natural institutional home for renewable energy will be in the current government structure, but it is recommended that high-level consultations between the UNDP and NEC is initiated to ensure that there is coherence in interventions and initiatives. If such a dialogue is initiated and carried forward, it would be beneficial to a broad array of actors – public, private and international – with an interest in engaging in renewable energy activities within the country.

The exact nature of the process will be dependent on future development and restructuring of the national energy sector, but there is an urgent need to kick-start a public as well as intra-government platform for development of renewable energy plans and programmes. The ambitious short-term targets set out in the National Renewable Energy Masterplan are unlikely to be met, and as these have remained essentially unchanged they are in need of reviewing. Also, care needs to be taken to incorporate support for local suppliers or vendors of renewable energy goods and services in an unbiased manner, to ensure that a national industry can be supported while at the same time not introducing protectionist barriers that risk raising the costs of imported renewable energy goods and services.

In terms of sequencing of activities, the order in which actors such as Federal Ministries, ECN, NNPC and NPHC are approached and engaged will be dependent on the establishment of a constructive platform being built at the highest level of Government.

A detailed work plan for the first year of the programme is found in the next section below.

IV. ANNUAL WORK PLAN – YEAR 1

UNDAF OUTCOME: Organized agents articulate demand for and enable equitable delivery of services for growth and employment in rural markets

CPAP OUTCOME: Scaled-up access to affordable and reliable renewable energy to offer off-grid power to SMEs and potentially small rural and urban settlements

PRINCIPAL IMPLEMENTING PARTNER (IP) AND SUB-IPS: Bank of Industry

EXPECTED OUTPUTS	PLANNED ACTIVITIES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET (2011)	
		Q1	Q2	Q3	Q4		Funding Source	Amount (USD)
							Budget Description	
Outcome 1: Improved access to reliable and renewable energy service options for MSMEs								
Output 0 Support to Project Management Activities	1.1.1 Communication and advocacy 1.1.2 Project M&E 1.1.3 HACT and Audit Assurance					UNDP		\$19,650

<p>Output 1.1 Increased number of renewable energy projects realised/under development</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Current BOI portfolio - Current level of renewable energy services accessed by MSMEs <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Number of new credits or investments incorporating a renewable energy service component (both from supply and demand side) - Number of project developers or PPP arrangements provided with support 	<p>1.1.4 PMU established Funding, staffing and operationalisation of the Programme Management Unit at the BOI.</p> <p>Result: Programme launched</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Implementing Agent formally contracted ToRs for PMU Management Team staff positions confirmed - Approval and release of start-up funds <p>Result: PMU Management Team recruited and office set up</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Recruitment of PMU Management Team - Recruitment of support staff - Establishing physical office locations - Appointment of Advisory Board <p>Result: Work plans and management systems established</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Confirm work plans and partnership agreements - Reporting schedules and requirement agreed on - Establish reporting and budgeting systems - Establish M&E system 		UNDP and Implementing Agent (IA)	DP & IA	Staffing Operationalising	Office establishment costs: 50,000 (Physical office and ICT infrastructure) Staffing: 100,000 (PMU Management Team(MT) staff and support staff cost during Y1)
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<p><i>under the Programme</i></p> <p>No of SME operators, disaggregated by gender of owner manager with access to viable RE technology</p>	<p>1.1.2 Support programme project proponents:</p> <p>Support the project proponents in applying for BOI, World Bank or other funding in the development of business plans and operational capacity through technical assistance and other support as specified under outcome 2 to increase their capacity to tap financing and assistance for renewable energy service access expansion</p> <p>Result: RE Programme well-known and partnerships initiated</p> <p>Actions:</p> <ul style="list-style-type: none"> - Publish notices and disseminate information on the initiation of the programme and its objectives and content - Conduct stakeholder assessment missions to a selection of States, possibly the UNDP focal states to piggy-back on existing networks and channels - Approach existing BOI as well as UNDP partners to solicit new collaborations <p>Result: Capacity building and training programme coordinated (detailed under Outcome 2)</p> <p>Actions:</p> <ul style="list-style-type: none"> - Identify and sign MoUs with a number of training providers and facilitators as deemed necessary. - Initiate the capacity assessment, support and training programmes <p>Result: Programme review process established</p> <p>Actions:</p> <ul style="list-style-type: none"> - Establish a process for regular review of the capacity support activities in terms of demand for services provided and impact of services delivered by the programme – activities should be demand driven 	<p>IA</p>	<p>DP</p>	<p>Coordination and management of capacity strengthening activities</p>	<p>Administrative costs: 8,000 (Coordination, information material and meeting costs)</p> <p>Travel costs: 20,000 (For PMU MT to conduct State-level stakeholder assessment missions)</p> <p>Information costs: 25,000 (press releases, public material etc)</p>
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<p>1.1.3 PPP arrangements</p> <p>Development and marketing of PPP arrangements and models that can bring together BOI and other public financing with project developers and technology providers</p> <p>Result: PPP models developed and stakeholder input solicited</p> <p>Actions:</p> <ul style="list-style-type: none"> - Commission review of existing PPP models in Nigeria and internationally, and draft PPP models suitable for MSMEs to access. - Carry out a stakeholder input process including Government, BOI, MSMEs, banks, regulators, utilities/service providers and technology suppliers to ensure that the PPP arrangements proposed are realistic and demanded. <p>Result: Piloting of PPP instruments</p> <p>Actions:</p> <ul style="list-style-type: none"> - Limited pilot launch of new PPP instruments by BOI to gauge interest and identify issues and problems. 				IA	UNDP	Management and consulting services	Administrative costs: 4,000 (Stakeholder process, consultant procurement) Consultant costs: 20,000 (Review of PPP models and development of tailored PPP models)
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Outcome 2: Developed capacity of stakeholders to facilitate invests in the renewable energy sector

<p>Output 2.1 Capacity development for project developers</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Limited capacity to implement projects with a renewable energy service focus or component <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Number of training packages developed - Number of training courses conducted - Number of participants in training activities 	<p>2.1.1 Capacity needs and gaps assessment</p> <p>In order to make the programme as effective and efficient as possible, one first has to assess the existing capacities of project developers in the field of renewable energy. The foundation for which capacities to build on has to be identified and analysed.</p> <p>A clear focus should be kept on targeting both MSMEs which have started developing, or at least have a notion of what could be done within the field of renewable energy options, and those which have not yet considered what opportunities renewable energy services can offer to their business. The first group will need a different kind of support than the second group. For instance, the latter group may be in greater need of meeting places, training activities and contacts/partners than the first group.</p> <p>Result: Decision on scope of training programme</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Shortlisting of institutions at central level/identification of prioritised states, if any - Identification of prioritised sectors, if any (e.g. <ul style="list-style-type: none"> o These priorities should capture promising emergent businesses or clusters, which vary geographically, that are of interest for lenders and financiers <p>Result: Needs assessment</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Develop ToR for capacity development needs assessment - Conducting a rapid training needs assessment including gap analysis (through key informant interviews, workshops or focus group type exercises) - Conduct a rapid review of existing domestic expertise that could provide relevant and appropriate training. 				IA			UNDP	Field work Technical assistance Consultations	<p>Training needs assessment: 20,000</p> <p>(Outsourced to consultant or, possibly, carried out by PMU)</p> <p>Travel: 15,000</p> <p>(For PMU MT consultations and missions)</p> <p>Administrative costs: 4,000</p> <p>(Coordination, consultant procurement if applicable)</p>
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<p>2.1.2 Development of training and capacity building programme</p> <p>Based on the gap analysis performed, the content of the training program can be determined. Typically, topics such as basic characteristics of various renewable energy technologies, market dynamics and alternative service delivery models need to be covered. In addition, how to develop a successful business plan and how to achieve financing will very likely be key issues to cover.</p> <p>The final determination of topics will depend on the results of the training needs assessment and the gap analysis activities performed above.</p>	<p>2.1.2 Development of training and capacity building programme</p> <p>Based on the gap analysis performed, the content of the training program can be determined. Typically, topics such as basic characteristics of various renewable energy technologies, market dynamics and alternative service delivery models need to be covered. In addition, how to develop a successful business plan and how to achieve financing will very likely be key issues to cover.</p> <p>The final determination of topics will depend on the results of the training needs assessment and the gap analysis activities performed above.</p> <p>Result: Preparations and agreements</p> <p>Actions:</p> <ul style="list-style-type: none"> - Develop ToR for training providers - Develop ToR for the preparation of training packages. - Identify and sign MoUs with a number of training providers and facilitators as deemed necessary. - Decide on a schedule for activities, and tentatively invite MSMEs, energy service project developers and technology suppliers. <p>Result: Training modules developed</p> <p>Actions:</p> <ul style="list-style-type: none"> - Develop training modules on the (tentatively) following topics <ul style="list-style-type: none"> • Renewable energy (RE) services approaches and technologies • Energy demand and markets • International Best Practices, Case Studied and Successes • Bidding documents and legal agreements including Power Purchase Agreements • RE Project Financing, including Banking, Innovative Finance, Carbon Finance • RE Service delivery models • RE business management • RE project assessment - Establish methods for soliciting feedback and criteria for evaluating this 			IA	UNDP	<p>Technical assistance Capacity building Partnership building</p>	<p>Development of material: 40,000 (Consultant cost) Administrative costs: 4,000 (Coordination, training provider procurement)</p>
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	<p>2.1.2 Implementation starting of the first round of the training and capacity building programme</p> <p>It is important to make the training sessions as substantive and constructive as possible, and materials which the participants can bring home have to be developed and disseminated in a jargon-free language and with clear key messages.</p> <p>Based on the detailed training plan for selected project developers and MSME user clusters, the next step is to start implementing the training activities</p> <p>Result: Conduct training courses</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Conduct training courses and disseminate training materials. - Agree on modalities for developers looking for financing to access continued and tailored support from the programme. <p><i>At the conclusion of the programme, project developers should be able to take the lead in the process of developing a bankable business case which includes renewable energy services.</i></p> <p>Result: Review and revision of programme based on feedback</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Solicit participant feedback and input on the quality and relevance of training provided - Review and revise the training programme as necessary based on feedback from participants 					IA	UNDP	<p>Technical assistance Capacity building Partnership building</p> <p>Training programmes in 6 states: 100,000 (Training providers and other external experts)/Analysis and dissemination of results: 5,000 (Preparation, printing, dissemination) Travel costs: 20,000 (For PMU and course venues)</p>
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<p>Output 2.2</p> <p>Institutional Capacity development for relevant financing institutions and frameworks</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Limited capacity to assess credit risk of investments with a renewable energy service focus <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Number of training packages developed - Number of training courses conducted - Number of participants in training activities 		<p>2.2.1 Capacity needs and gaps assessment</p> <p>In order to make the programme as effective and efficient as possible, there is also a need to assess the existing capacities of financial institutions in the field of renewable energy. The foundation for which capacities to build on has to be identified and analysed.</p> <p>A clear focus should be kept on services and products that can either be offered directly to MSMEs, or indirectly through third party technology or services providers.</p> <p>Result: Decision on scope of training programme</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Shortlisting of institutions at central level - Identification of prioritised states, if any - Identification of prioritised sectors, if any <ul style="list-style-type: none"> o These priorities should capture promising emergent businesses or clusters, which vary geographically, that are of interest for lenders and financiers <p>Result: Needs assessment</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Conducting a rapid training needs assessment including gap analysis (through key informant interviews, workshops or focus group type exercises) - Conduct a rapid review of existing domestic expertise that could provide relevant and appropriate training and product development. 			IA	UNDP	<p>Field work Technical assistance Consultations</p>	<p>Training needs assessment: 10,000 (Consultant cost, or carried out by PMU) Travel: 5,000 (For PMU for consultations and meetings) Administrative costs: 4,000 (Coordination and preparation)</p>
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	<p>2.2.2 Development of training and capacity building programme</p> <p>To stimulate renewable energy investments, targeted capacity building activities will be performed for actors in the financial sectors. The relatively limited capacity at present has been identified as a barrier that needs to be overcome. In order for creditors to understand how to evaluate business/investment opportunities in the field of renewable energy, they not only have to understand and be updated on the energy market as such, but also understand how access to alternative and renewable energy services impact businesses in terms of financial flows, cost structures, short- and long term profitability.</p> <p>The target group for this activity includes, but is not limited to:</p> <ul style="list-style-type: none"> > BOI own staff > Commercial banks > Rural/development banks <p>Result: Preparations and agreements</p> <p>Actions:</p> <ul style="list-style-type: none"> - Develop ToR for training providers - Develop ToR for the preparation of training packages. - Identify and sign MoUs with a number of training providers and facilitators as deemed necessary. <p>Result: Training modules Developed</p> <p>Actions:</p> <ul style="list-style-type: none"> - Develop training packages (tentatively) including the following topics: <ul style="list-style-type: none"> o Project screening and selection, including EIRR, FIRR and equity contribution o Development of new financial products for renewable energy o Integration or differentiation of financial products for renewable energy, and structuring of financial products/packages o Agreements, security documents and other legal documents of relevance to RE projects Decide on a schedule for activities, and tentatively invite representatives from the target groups. 					
						<p>Technical assistance Capacity building Partnership building</p> <p>Development of material: 30,000 (Consultant cost) Administrative costs: 4,000 (Coordination, training provider procurement)</p>

	<p>2.1.2 Implementation starting of the first round of the training and capacity building programme</p> <p>Since the activities are mainly targeting professionals in the financial sector, it is important to ensure that the activities and materials are focusing on providing new knowledge on MSMEs and renewable energy services. A key emphasis is the development and introduction of new services and products specifically targeting MSME investments with renewable energy components.</p> <p>Result: Implementation of training courses</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Confirm training course schedules and invite participants - Conduct training courses and disseminate training materials. <p>Result: Development of new financial services and products</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Together with participants, agree on ways forward for development and introduction of new financial services and products - Identification of additional support deemed necessary to develop these. <p>At the conclusion of the training programme, participating individuals and organisations should have the capacity to:</p> <ul style="list-style-type: none"> - Evaluate business plans from both energy sector project developers and MSME businesses in terms of renewable energy services and investments. - Develop tailored financial products and services that incorporate, or focus on, renewable energy services for MSMEs. <p>Result: Review and revision of programme based on feedback</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Review and solicit participant input on quality and relevance of programme - Revise the training programme as necessary based on feedback from participants 			IA	UNDP	<p>Technical assistance Capacity building Partnership building</p>	<p>Training programmes: 70,000 (Training providers and other external experts) Analysis and dissemination of results: 4,000 (Preparation, printing, dissemination) Travel costs: 10,000 (For PMU and training venues)</p>
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<p>Output 2.3</p> <p>Capacity development and support for public policy formulation and RE development planning at both the Federal and State levels</p> <p>Baseline:</p> <ul style="list-style-type: none"> - Modern renewable energy services are still at an early stage of development <p>Indicators:</p> <ul style="list-style-type: none"> - Number of public plans or developments supported through the Programme - Number of institutions supported - Number of staff 	<p>2.3.1 Analytical and advisory services</p> <p>Analytical and advisory services through limited technical and financial grants⁴ to states, or state-supported MSME clusters or industrial estates.</p> <p>Result: Identification and analysis of critical bottlenecks</p> <p>Actions:</p> <ul style="list-style-type: none"> - Identification of critical services that can eliminate current public policy and/or planning bottlenecks in RE services development for MSMEs. This is done through consultations with State government bodies and MSME clusters or industrial estates. - Identify relevant expertise in the areas identified and sign MoUs - Develop ToRs for identified service providers <p>Result: Provision of advisory services</p> <p>Actions:</p> <ul style="list-style-type: none"> - Offer limited services, including help in raising funds for larger studies, to state-level policy and planning bodies with the aim to support pre-investment options assessments. 					UNDP and IA	UNDP and matching funds	Technical assistance Consultations	<p>Travel costs: 15,000 (PMU consultations and policy review)</p> <p>Administrative costs: 4,000 (Coordination and identification of experts)</p> <p>Consultancy pool: 20,000 (Start-up funding for minor advisory sessions)</p>
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⁴ The sequencing of such interventions needs to be harmonised with the availability of matching funds.

<p><i>trained</i></p>	<p>2.3.2 Upstream capacity development support</p> <p>Capacity development support for upstream phases of renewable energy programmes such as supporting the Government (both State and Federal) to assess cost implication of developing existing or new potential renewable energy sites and help present such for financing.</p> <p>Result: Identification of capacity support needs</p> <p>Actions:</p> <ul style="list-style-type: none"> - Prioritisation of "early mover" States that have announced targets for renewable energy development, particularly for MSME services. - Conduct rapid assessment of most urgent support required - Develop ToRs for services requested <p>Result: Provision of upstream capacity support</p> <p>Actions:</p> <ul style="list-style-type: none"> - Engage relevant expertise to carry out assessments and training activities - Offer and provide support in terms of training and capacity building on identified priority issues e.g.: <ul style="list-style-type: none"> o Cost assessments of renewable energy development options o Policies and policy instruments conducive for support of renewable energy development 					UNDP and IA	UNDP	<p>Consultations Technical assistance Dialogues and meetings</p>	<p>Coordination meetings: 5,000 (PMU missions, identification of experts) Consultancy pool: 20,000 (Start-up funding for minor training sessions)</p>
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<p>Output 2.4 Guidelines and tools based on best practise developed and disseminated</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Lack of renewable energy business development practices and guidelines <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Number of ToRs developed for drafting best practices and guidelines 	<p>2.4.1 Initiation of the development and dissemination of RE services best practices and guidelines</p> <p>To compile best-practice in the field of renewable energy concerning both business models and markets will facilitate information dissemination and shorten the time for a first response on enquiries from MSMEs interested in generation business. By developing such guidelines, a comprehensive work can be done once for all and then updated when necessary. These guidance documents should at least cover:</p> <ul style="list-style-type: none"> - Renewable energy services primer. - Overview of relevant actors on the market for renewable energy. - Delivery models. - Guide to Business Plan. <p>During the first year, it is not planned that all such documents should be prepared.</p> <p>Result: Preparation for development of best practice and guidance documents</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Compilation and collection of material and documentation during the course of capacity development support process. - Refinement of critical requirements in terms of knowledge and capacity gaps - Development of a plan for drafting the above documents during year 2. - Development of ToR for the drafting of the above documents. 			UNDP and IA	UNDP	Data collection Consultations	Administrative costs: 4,000 (Information gathering, planning)
<p>Outcome 3: Policy level dialogues established and maintained</p>							

<p>Output 3.1 Dialogue to influence renewable energy policy development</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Ineffective and insufficient public-private dialogues to inform renewable energy policy <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Platform for renewable energy policy dialogues established - Number of dialogue events organised, and number of participants in events 	<p>3.1.1 Mapping and advice on renewable energy policy instruments and programs</p> <p>In order for experiences and knowledge to be translated into replications of interventions as well as into informed policy development, it is critical that there is a platform for private and public actors to engaging directly.</p> <p>Public-private dialogues result in improved relevance of public policies to support renewable energy investments, and private actors are better informed about existing support schemes.</p> <p>This will be the point of interaction for the MSME sector to, through the UNDP Programme, provide input and advice to the policy development process.</p> <p>Result: Mapping of overlapping or mutually supporting programmes or instruments</p> <p>Actions:</p> <ul style="list-style-type: none"> - Conduct a detailed mapping of support programs within the field of renewable energy offered by other institutions, with a focus on identifying and comparing target groups, content, methods and duration of support activities. This set of programmes includes, but is not limited to: <ul style="list-style-type: none"> o The processes of tariff reform and development of feed-in-tariffs led by the federal government needs to be followed closely. o The UNIDO programme for development of small hydro and biomass needs to be kept informed and vice versa. o Other multilateral programmes, most notably the World Bank energy programme, but also the IFC energy portfolio in the country. o Bilateral cooperation programmes of relevance, most notably the programmes on energy sector development (USAID) and private sector development (GTZ). o State-level energy sector development plans need to be followed in the states where UNDP plans energy sector activities. o Industrial and commercial development in key areas and sectors need to be screened from the perspective of this programme. <p>Result: Regular revisiting of Programme to keep up with policy development</p> <ul style="list-style-type: none"> - Define potential synergies and overlaps to guide LINDP program development. 	UNDP	UNDP	Consultations	<p>Administrative costs: 4,000</p> <p>Consultancy costs: 10,000</p>
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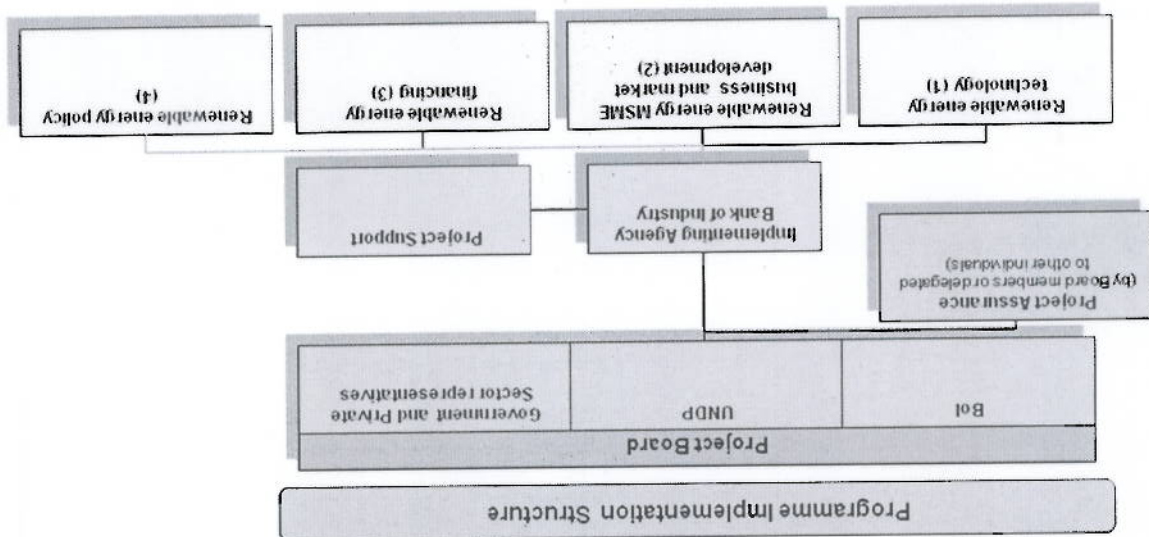
	<p>3.1.2 Initiate dialogue on renewable energy policy development</p> <p>The establishment of a national policy dialogue is foreseen to be initiated but not fully be established during the first year.</p> <p>Result: Policy dialogue launched</p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> - Develop dialogue platform and ToR in consultation with selected key stakeholders - Invite target groups and key stakeholder about to the policy development dialogue forum - Conduct regular dialogue events with specific topics as well as open-ended sessions - Regular reporting of dialogue outcomes and issues to key stakeholders e.g. UNDP, Federal and State Government, industry associations, the general public, etc 					UNDP	UNDP	Consultations and awareness	<p><i>Administrative costs: 4,000</i></p> <p><i>Meeting costs: 5,000</i></p>
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<p>Output 3.2 Dialogue to support renewable energy planning</p> <p><u>Baseline:</u></p> <ul style="list-style-type: none"> - Strategic public planning for renewable energy not in sync with actual development <p><u>Indicators:</u></p> <ul style="list-style-type: none"> - Lead public agency for strategic renewable energy planning identified - Advisory services offered to public sector strategic planning for renewable energy services 	<p>3.2.1 Advice and advocacy for the establishment of an institutional home for public sector renewable energy planning</p> <p>In order to promote and support realistic and implementable plans and projections there is a need to establish, or appoint, a responsible entity within the federal government that can be held accountable for planning and act as a node for soliciting support and input in the planning process. It is currently not clear where the natural institutional home for renewable energy will be in the current government structure, but it is recommended that high-level consultations between the UNDP and NEC is initiated to ensure that there is coherence in interventions and initiatives. If such a dialogue is initiated and carried forward, it would be beneficial to a broad array of actors – public, private and international – with an interest in engaging in renewable energy activities within the country.</p> <p>In terms of sequencing of activities, the order in which actors such as Federal Ministries, ECN, NNPC and NPHC are approached and engaged will be dependent on the establishment of a constructive platform being built at the highest level of Government.</p> <p>Result: Renewable energy has a clearly established institutional home within the Government</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> - Conduct early consultations with NEC, ECN, NNPC, NPHC and Federal Ministries - Develop an advisory function to support and facilitate restructuring efforts if deemed necessary - Conduct advocacy and awareness activities to highlight the need for an institutional home for renewable energy within the Government structure 					UNDP	UNDP	Consultations and awareness	<p><i>Administrative costs: 4,000</i></p> <p><i>Meeting costs: 10,000</i></p>
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TOTAL					Consultations and awareness	Administrative costs: 4,000 Meeting costs: 10,000
	<p>3.2.2 Support for ambitious, but realistic, planning processes for setting targets for renewable energy development</p> <p>The exact nature of the process will be dependent on future development and restructuring of the national energy sector, but there is an urgent need to kick-start a public as well as intra-government platform for development of renewable energy plans and programmes. The ambitious short-term targets set out in the National Renewable Energy Masterplan are unlikely to be met, and as these have remained essentially unchanged they are in need of reviewing.</p> <p>Result: Strategic planning support/advisory function</p> <p>Actions:</p> <ul style="list-style-type: none"> - Conduct early consultations with NEC, ECN, NNPC, NPHC and Federal Ministries on the gap between current renewable energy targets as compared to ongoing development in the sector - Develop a plan for an advisory and support function for public planning processes on renewable energy development. This will likely involve a broad array of actors, including the ones above as well as e.g. State government, UNIDO, other donors, private developers and industry associations. 			UNDP	UNDP	

V. MANAGEMENT ARRANGEMENTS

Based on the assessment of primary barriers and institutional framework, coupled with the objectives, outputs and activities, the following organisational structure for the implementation of the programme is proposed.



BANK OF INDUSTRY (BOI)

BOI was set up by the Federal government to address the financial needs of manufacturers and other operators in the real sector in October, 2001, following the reconstruction of the mandates of the former Nigerian Industrial Development Bank (NIDB), the National Economic Reconstruction Fund (NERFUND) and the Nigerian Bank for Commerce and Industry (NBCI). This development has made BOI the foremost DFI in the country having been in existence since 1964. BOI is primarily a Federal government Institution with two main shareholders namely the Ministry of Finance Incorporated (MOFI) and the Central Bank of Nigeria.

The core mandate of the bank is providing financial assistance for the establishment of large, medium and small projects as well as expansion, diversification and modernisation of existing enterprises and the rehabilitation of ailing ones.

Funds Managed by BOI

BOI has continued to be appointed to manage development initiatives at state and national levels. They include the management of:

- Micro, Small & Medium Enterprises Development (MSME) Funds in several states.
 - The Federal Government's N100 billion Cotton, Textile and Garment (CTG) Scheme.
 - The Federal Government's Rice Intervention Fund of N10.0 billion.
 - The Business Development Fund for Women (BUDFOW) on behalf of the Federal Ministry of Women Affairs and Social Development (FMWASD), which provides soft loans to women entrepreneurs.
 - The Central Bank of Nigeria's N500 billion Intervention Fund for the Power Sector and Refinancing/Restructuring of Bank Loans to the Manufacturing and Small and Medium Enterprises Sector.
- N200 billion has been appropriated for the refinancing/restructuring of banks' existing loans to manufacturers.

POSITION 1: PROGRAMME MANAGER (PM)	
<p>Appointing Authority: BOI with no-objection from Project Board</p> <p>Reports to: BOI Management, UNDP Programme Officer</p> <p>Supervises: PMU staff</p>	
<p>BASIC FUNCTION: Responsible for the implementation of the Programme as well as its strategic direction, operations and overall functions and reporting to key stakeholders.</p>	
MAJOR ACTIVITIES OF THE POSITION:	
<ol style="list-style-type: none"> 1. To be responsible for the overall Management and operations of the Programme including policy and operational matters. 2. To provide strategic direction in the major functions of the operations and market fit to key stakeholders, financiers and target audiences. 3. To review the organisation's annual accounts and other statutory reports and submit to the Board for approval. 4. To prepare the Programmes' operational, financial and other periodic reports, corporate plans and other reporting requirements and submit to the Board for information and/or approval as the case may be. 5. To promote investment in renewable energy projects and activities that improves access to modern energy services for social and productive uses. 6. Overall responsibility of programme implementation and the quality of outputs generated. 	

PMU Management Team

The Management Team (MT) is responsible for the overall outputs of the programme, as well as the day-to-day management and deliveries. It will consist of four full-time staff, of which one is the overall responsible manager and the other three responsible for thematic streams running through the programme. Each MT member must be able to represent the programme in its entirety and should be acknowledged and experienced professionals in their respective field. The members of the MT can either be recruited explicitly for the duration of the programme, or be seconded from a sponsoring or partner organisation. The job descriptions and required expertise of the professional positions of the PMU are presented below.

Advisory Board

The advisory board will be established to provide strategic guidance, ensure accountability and support the PMU. The members of the advisory board will not have formal directorship over the programme, but should be granted access to activities and documentation under the programme unless there is commercially sensitive information that should not be disclosed unless subject to non-disclosure agreements. The advisory board should include representatives from Government, UNDP as well as private organisations.

There is an on-going collaboration between BOI, UNIDO, CBN, and Alliance for Green Revolution in Africa (a private agency for agricultural development and financing in Africa) to develop a framework for the identification of agricultural value chains and providing financing window for the agricultural sector of the economy with BOI as the managing agent.

▪ N300 billion is for the power sector.

<p>MAJOR ACTIVITIES OF THE POSITION:</p> <ol style="list-style-type: none"> 1. Act as the focal point for coordination between the PMU, banks, financial experts and investors 2. Responsible for the financial aspects of the programme. <ul style="list-style-type: none"> ▪ Provide advice and input on the strategic direction of the programme ▪ Development of credit risk assessment modules for renewable energy ▪ Development of PPP models ▪ Implementation of financial instruments developed under the programme ▪ Capacity gap and training needs assessment ▪ Interact with stakeholders on financial matters
<p>BASIC FUNCTION:</p> <p>Manage the Programme components and activities directed at financial institutions, business development and related outputs.</p>
<p>Appointing Authority: BOI with no-objection from Project Board Reports to: PM</p>
<p>POSITION 2: FINANCIAL MANAGER</p>

<p>MINIMUM EXPERIENCE:</p> <p>At least 15 years professional experience, of which 10 in a management position.</p>
<p>MINIMUM EDUCATIONAL AND PROFESSIONAL REQUIREMENTS:</p> <ul style="list-style-type: none"> ▪ At least Master's Level Degree in Business Administration, Finance, Engineering, Energy or other relevant field. ▪ Proven management track record ▪ Skilled manager and motivator ▪ Strong strategic and analytical skills ▪ Strong presentation skills in high-level settings ▪ Experience from either industry, financial or energy sector ▪ Ability to travel within Nigeria as well as overseas ▪ Excellent communication skills and fluency in English
<ol style="list-style-type: none"> 7. Resource mobilization. <ul style="list-style-type: none"> ▪ Coordinate external resources made available to the programme ▪ Solicit additional resources needed for the implementation of the full programme (with support from UNDP) 8. Strategic partnership building. <ul style="list-style-type: none"> ▪ Build and maintain partnerships at the programme level with government and private key stakeholders ▪ Liaison and interaction with partners, including the beneficiaries of the programme 9. Focal point for contacts with other agencies and institutions, including policy dialogues.

<p>MAJOR ACTIVITIES OF THE POSITION:</p> <ol style="list-style-type: none"> 1. Conduct needs assessment/surveys for determining the training and capacity building needs of the various target audiences to enhance their capacity in renewable energy development. 2. Prepare comprehensive appropriate training packages to meet the needs of the various stakeholders and target audiences. 3. Organize and conduct training courses, seminars and workshops. 4. Soliciting input from participants and revise programmes to meet stated demands 5. Coordinate and mobilize the necessary financial and human resources needed to undertake training and capacity building activities. 6. Outsource and contract training and capacity building activities to specialized and competent organizations. 7. Day-to-day liaison and networking with training institutions and service providers. 8. Responsible for the development and dissemination of information and promotional material. 9. Prepare annual work plans and budgets for the capacity building activities and outputs.
<p>BASIC FUNCTION:</p> <p>Manage the Programme components and activities related capacity building and information and awareness activities.</p>
<p>POSITION 3: CAPACITY DEVELOPMENT MANAGER</p> <p>Appointing Authority: BOI with no-objection from Project Board Reports to: PM</p>

<p>MINIMUM EDUCATIONAL AND PROFESSIONAL REQUIREMENTS:</p> <ul style="list-style-type: none"> ▪ At least Master's Level Degree in Business Administration or Finance ▪ Skilled manager and motivator ▪ Strong strategic and analytical skills ▪ Experience from credit risk assessment and financial services ▪ Strong presentation skills in high-level settings ▪ Ability to travel within Nigeria as well as overseas ▪ Excellent communication skills and fluency in English 	<p>MINIMUM EXPERIENCE:</p> <p>At least 10 years experience from the financial sector</p>
<ol style="list-style-type: none"> 3. Provide substance for the development and implementation of training and capacity building on financial issues. 4. Day-to-day liaison and networking with financial institutions and project developers. 5. Prepare annual work plans and budgets for the financial activities and outputs. 6. Prepare annual and quarterly financial reports for the PMU. 	

<p>MINIMUM EDUCATIONAL AND PROFESSIONAL REQUIREMENTS:</p> <ul style="list-style-type: none"> ▪ BA/BSc. in Education or Human Resources Development. And Computer literacy ▪ Skilled organizer and facilitator ▪ Strong communication and teaching skills ▪ Experience from training and capacity building for organizations and individuals ▪ Strong presentation skills ▪ Ability to travel within Nigeria as well as overseas ▪ Excellent communication skills and fluency in English <p>MINIMUM EXPERIENCE:</p> <p>At least 10 years experience in training, capacity building and communication.</p>	<p>POSITION 4: RENEWABLE ENERGY PROJECTS MANAGER</p> <p>Appointing Authority: BOI with no-objection from Project Board</p> <p>Reports to: PM</p>	<p>BASIC FUNCTION:</p> <p>Responsible for the identification of appropriate project-level as well as sector-level renewable energy opportunities and options, and advice on planning and policy to support renewable energy developers.</p>	<p>MAJOR ACTIVITIES OF THE POSITION:</p> <ol style="list-style-type: none"> 1. Act as the focal point for coordination between the PMU, developers, technical experts and contractors as well as suppliers of goods and services. 2. Responsible for the energy project development aspects of the programme <ul style="list-style-type: none"> ▪ Development of business models for energy services provision ▪ Development of best practices and guidelines for renewable energy investments 3. Advising the PM on all aspects of renewable energy project development. 4. Identify, promote, and support developers seeking guidance and assistance for preparing and implementing renewable energy projects. 5. Oversee the technical aspects of procurement of the services of consultants and contractors. 6. Work closely with the financial sector to promote modern rural energy financing that will support the REF's on-lending activities. 7. To advise on required changes renewable energy policy and strategy. 8. Provide substance for the development and implementation of training and capacity building on energy project development issues. 9. Prepare work plans and budgets for the PM. 	<p>MINIMUM EDUCATIONAL AND PROFESSIONAL REQUIREMENTS:</p> <ul style="list-style-type: none"> ▪ At least Master's level degree in Engineering ▪ Strong analytical skills ▪ Familiarity with technical standards related to energy systems
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It has to be well understood and agreed upon that the plan serves as a comprehensive blue print for implementing each component of the support program and has to be adhered to. As the support program is to be implemented over a four year period, one has to make detailed plans for activities, their sequence and expected results in order to ensure consistency and result oriented progress.

To make sure that the work plan does not become obsolete and outdated, there must be procedures in place to update and adapt the document as required. Such procedures could include for instance an annual review informed by the M&E activities detailed below. The key activities to be implemented for the establishment of a work plan are the following:

- Approve and if necessary adjust suggested activities, outputs, objectives and indicators defined in the work plan

The support function provided by UNDP will primarily focus on the convening and facilitation of policy dialogue platforms. Furthermore, UNDP should be driving, or at least sharing, the fund-raising activities to secure the matching funds needed to implement the programme in its entirety.

The Programme Board will meet at least twice per year to review overall implementation of the project and between meetings there will be electronic exchanges of information and video conferences.

At the activity level, the Programme Board will assist in identifying and contracting collaboration partners. UNDP has a unique standing and a long term relationship with the government of Nigeria, and will therefore be the key contact point with the public authorities related to programme activities as well as a partner in the policy dialogues.

The Programme Board will be responsible for providing strategic guidance, project quality assurance and financial oversight of the project. The Programme Board will further approve work plans, including the prioritisation of programme activities and assess the quality and relevance of programme activities. The Programme Board will further advice on coordination with other agencies involved in the project, and finally monitor results through review and approval of project reports on the quality of outputs and efficiency of output delivery.

The Programme Board is envisioned to consist of representatives from UNDP, BOI, Federal Government, one or more State Governments, as well as private sector and civil society.

The PMU should also expect to have reasonable freedom and flexibility in the executing of its duties while of course being accountable to the Programme Board – to which it also should be reporting on progress and issues at regular intervals. The PMU will also be responsible for producing annual reports to be circulated, at least, to all funders of the programme.

In addition to the above core positions, the PMU will probably need to access secretarial, accounting and driver services. Whether this can be accessed/leased as part of the office facilities or has to be employed directly by the PMU has to be decided on. There will also be a need for legal services for contracts and agreements, as well as lay outting and printing services.

<ul style="list-style-type: none"> Experience from energy project development and energy systems functionalities Strong presentation skills in high-level settings Preferably experience from private industry Ability to travel within Nigeria as well as overseas Excellent communication skills and fluency in English 	<p>MINIMUM EXPERIENCE:</p> <p>At least 10 years experience in energy project development, with preference given to experience with renewable energy.</p>
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Finally, it is of utmost importance that the program activities and achievements are regularly monitored and evaluated (M&E). This is in order to make sure that the intended goals have been achieved, but also to detect problems and unexpected outcomes as soon as possible. Although a generic approach to M&E can be applied, each M&E program has to be tailored to the specific situation, taking the actual activities and performance targets into account.

- Approve and if necessary adjust suggested milestones and schedule for deliverables
 - Approve and if necessary adjust suggested resource requirements and budget for each activity
 - Establish and implement procedures for a regular/annual update of the work plan
- The same careful attention must be given to the selection of the types of projects which will receive support from UNDP. One should make sure to select a mix of micro, small and medium size projects. Also, a range of alternative technologies should be represented, although some are more mature and ready to be taken to the market than others. And finally, given the diversity in available service delivery models, there should also be a variation of these represented in the program in order to collect valuable lessons learned etc. The support to specific interventions must also be balanced against the time and resources needed for engaging with, and influencing of, the policy development and implementation process.
- The final selection of priority states and types of projects to be supported should be performed according to an agreed process – maybe by the use of dialogues with key stakeholders, consultations at State level (for instance together with the World Bank, Bank of Industry and others), interviews with local authorities etc, in order to ensure efficiency, effectiveness and relevancy.
- The key activities to be implemented in order to select priority states and develop selection criteria for projects to be supported are the following:
- Carry out consultations and interviews with key stakeholders including local authorities in order to determine selection criteria for the choice of priority states
 - Identify priority states in which the UNDP support program can contribute the most according to established criteria that will include, but not be limited to:
 - UNDP preferences for focusing resources on states with existing UNDP programmes that can create synergies (e.g. renewable energy and agriculture)
 - Potential for quick wins by supporting project developers and State Governments who are articulating funding proposals for investment support and TA (e.g. provide early support for actors who are entering into discussion with the World Bank for financing under the new energy programme)
 - Synergetic interventions where BOI is supporting MSME clusters or sectors (e.g. provide policy advice and support to State Government and renewable energy expertise to expand renewable energy components in upcoming BOI credits)
 - Define criteria for selection of types of projects to be supported by the program in the selected priority states, of which the following are key:
 - Initiatives that have strong potential for replicability to ensure that new products or services developed and deployed can be institutionalised and sustained
 - Technology neutral (i.e. the energy service developed is the measure of success) while at the same time not engaging in piloting new or commercially unproven technologies
 - Renewable energy sources and services that can combine economic, social and environmental benefits
 - Encourage initiatives that have a potential for adding substantive local content, or developing expertise in which Nigeria can become a regional leader

technical and project specific assistance both on the project development side as well partner related to the development of small hydropower sites; they can contribute with example, the United Nations Industrial Development Organization (UNIDO) is a key that have technical expertise in various aspects of the support programme. For UN agencies: it is expected that UNDP will work closely with specialised UN agencies

2. UN agencies and as far as possible align programme activities and for funding support partners and private sector development (GTZ), are also important as discussing (USAID) and private sector development (GEF), the programmes on energy sector development relevance, most notably are GEF, the programmes on energy sector development of MSMEs investing in renewable energy. Bilateral cooperation programmes of programme for co-financing programmes as well as offering finance to State Government contributions, forms an opportunity for the UNDP support co-financing by other Donors, the Federal Government of Nigeria, and participating as official development assistance (ODA) resources (credits) and remaining through Project", including a facility of USD 300 million, of which USD 200 million is envisaged issues: The recent launch of the "Nigeria Rural Access and Renewable Energy programme. For example, the World Bank will be a key partner regarding financing mobilize additional resources from donors to fill the financing gap of the support cooperation concerning the implementation of the programme activities; another is to will be approached to explore strategic partnerships. One aim is to establish Development Bank, the International Finance Corporation as well as bilateral donors 1. Development agencies and donors: multilateral agencies such as the African

the following:
There is a range of multinational and national institutions and agencies which can be relevant to participate in the Specific Expertise Units. The programme aims to benefit from a combination of technical, advocacy and financing partners for the overall support of the project and promotion of renewable energy investments. This includes, but is not limited, to

aspects.
on e.g. training, communications, development, gender, local context and environmental expertise, but for each of the four areas there is also a need to ensure inclusion of expertise at the activity level. It also important to remember that these do not only include technical intended to support the implementation of the support programme, either at a policy level or by similar institutions in Nigeria and realises synergies and complementarities. The units are programme builds on existing capacities relevant for the programme activities implemented interventions or collaborations. This structural element is intended to ensure that the representatives of external collaboration partners that the PMU can call on for specific These four units are not intended to consist of individual specialists, but rather a mix of

1. Renewable energy technology
2. Renewable energy M&E business and market development
3. Renewable energy financing
4. Renewable energy policy

specific expertise units supporting in the implementation of the programme activities:
In addition to the Programme Board and the Implementing Agency, there are four key

Partnerships and external expertise

The Results and Resources Framework (RRF), as well as a detailed work plan for the first year, will form the core of the Programme Document. The RRF also includes baselines which serve as a starting point and determines the current condition against which future change can be tracked, and indicators for what should be achieved when the activities have been performed. Hence, the baseline and the indicators constitute the framework against which the project is to be evaluated. The monitoring process will measure the results while the evaluation process will compare the results with the established indicators.

These external experts should be identified at an early stage in order for contact details, MoUs and other arrangements can be beneficial to the programme as a whole as well as to specific partners in the implementation process.

UNDP and BOI will invite key collaborating partners, both national and international, to coordination meetings at least once per year. This is important in order to ensure complementarities of activities and to achieve best possible impact of the UNDP support programme. Furthermore, UNDP and BOI can enter into more formal agreements with selected partners for specific parts of the support programme.

Potential participants	UNIDO, ECN, Universities, technical experts, technology providers
Renewable energy business and market development	UNDP, SMEDAN, World Bank, business and market development experts
Renewable energy financing	World Bank, African Development Bank, IFC, GTZ, USAID, NNPC, commercial banks, Federal Ministries, State Governments, external experts
Renewable energy policy	UNIDO, ECN, NERC, Federal Ministries, State Governments, external experts and facilitators

The following table indicates which partners could be invited to participate in which Specific Expertise Unit. The final composition of the Units is to be determined by the Programme Board.

3. National research and government institutions: There is a range of potential partners on a national level too. For example, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and their experience with supporting MSMEs in the field can contribute with valuable lessons and be a strong collaboration partner, in particular related to MSMEs business development support and training.
 4. Private sector partners: Private sector and business associations will be invited to participate in an advisory capacity to the project as part of the overall alliance of partners to the project. Individual companies will be invited as a discussing partner as well as a potential financing and implementing partner.
 5. Technical experts: The technical experts to be included for specific interventions such as assessments, training, or studies. These can include UN agencies, government bodies, private consultants or universities.
- as on the investor side. It is also expected that the UN agencies can contribute in different ways to feed into advocacy and policy dialogue activities.

VI. MONITORING FRAMEWORK AND EVALUATION

Monitoring and evaluation procedures will be guided by UNDP corporate guidelines. Monitoring and evaluation will be conducted throughout the cycle of the project with the objective of confirming whether planned outputs are being produced as planned and efficiently, identifying problems and take the corrective measures, verifying continued relevance of planned activities and finally identifying and analysing emerging risks and challenges to be taken into account in achieving results. The monitoring process will measure the results, while the evaluation process will compare the results with the established indicators.

To support systematic monitoring, a monitoring framework will be developed and agreed with key stakeholders. A dedicated monitoring and evaluation team will be established reporting to the Project Board, consisting of representatives from UNDP, an external monitoring and evaluation expert as well as some experts on the renewable energy sector. The Project Board will be responsible for the monitoring and evaluation of the overall support programme, while the Bank of Industry will be responsible for monitoring and evaluation activities conducted in the field. The project partners have to agree on a monitoring and evaluation plan and time frame, and ensure an efficient reporting structure integrating results into the continuous development of the support programme.

Within the annual cycle

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table below.

- An Issue Log shall be activated in Atlas and updated by the Implementing Agency to facilitate tracking and resolution of potential problems or requests for change.

- Based on the initial risk analysis a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.

- Based on the above information recorded in Atlas, a Project Progress Reports (PPR) shall be submitted by the Project Manager to the Project Board through Project Assurance, using the standard report format available in the Executive Snapshot.

- a project Lesson-learned log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project

- a Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events

Annually

- Annual Review Report. An Annual Review Report shall be prepared by the Implementing Agency and shared with the Programme Board. As minimum requirement, the Annual Review Report shall consist of the Atlas standard format for the QPR covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.

- Annual Programme Review. Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. This review is driven by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

- Activities to be performed in developing the M&E system for the Programme include:
- Appointing an M&E team to be responsible for the M&E activities and for disseminating the results to relevant actors. The team should be UNDP internal and include an M&E expert as well as experts in renewable energy. The team will be responsible for the implementation of the M&E plan.
 - The M&E team will develop an M&E plan, detailing which M&E activities are to be performed and when. The plan should be developed using the indicators listed for each activity in the RRF. The indicators are time bounded and it will be important to design the M&E work plan to suit the time frame for each activity.
 - A template for the reporting format will be developed by the M&E team, in order facilitate comparisons between the M&E activities.
 - The M&E team must develop an information plan, detailing which actors should have access to the results of the M&E process and how the information is disseminated.
- The M&E work to be conducted by the M&E team throughout the UNDP Programme includes the following:
- Conduct an initial meeting where the M&E team and the Implementing Agent agree on the work plan and the time frame for the M&E activities
 - Monitor results of all activities undertaken, conducted by the Implementing Agent in accordance with the work plan
 - Evaluate how the results correspond to the indicators, taking the time frame into account. Some indicators have longer time-horizon than others, which will require an evaluation of the progress so far and if the progress is on track towards reaching the target. This will also be conducted by the Implementing Agent.
 - Report results. The Implementing Agent should present written reports with the outcome of the activities in regular meetings with the M&E team, e.g. bi-annually.
 - Adapt and fine tune activities. If expected sub-targets are not met, it is crucial to adjust the work plan/take measures in order to get "back on track" towards the intended outcome. This should be done in close coordination with the evaluation activities performed in order to be able to achieve results until the next monitoring process starts. The M&E team will lead the work and consult all experts involved in the activities.
 - Prepare a final report when the UNDP support program has been completed. The Implementing Agent will be in charge and responsible for this activity.
 - Decide how the information collected is to be disseminated, for instance through a press release, a workshop or a printed report. The M&E team will be responsible for this activity.

Ex-post Evaluation

An ex-post evaluation shall be undertaken by independent consultants. The aims shall be to look at the lessons learnt and the actual impact of the project.

VII. RISK ASSESSMENT MATRIX

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngmt response	Owner	Submitted, updated by	Last Update	Status
1	Lack of interest from MSMEs to participate in training programs and engage in renewable energy investments	16 th July 2010	Organizational risk	P = 2 I = 3 The programme and its impact would considerably suffer if it is not supported by MSMEs	Efforts will be made to communicate the benefits of access to renewable energy options to MSMEs	UNDP, BOI			
2	Lack of interest from the financial sector to participate in training programs and invest in renewable energy projects	16 th July 2010	Organizational risk	P = 2 I = 3 The programme and its impact would considerably suffer if it is not supported by commercial banks, development banks and multinational agencies.	Efforts will be made to enable a better understanding of the opportunities for business for the finance sector in the field of renewable energy	UNDP, BOI			
3	The government of Nigeria does not prioritise renewable energy and as a consequence the policy environment for renewable energy is stagnating/getting worse	16 th July 2010	Political risk Regulatory risk	P = 2 I = 2 The programme activities are not dependent on changes in the policy environment to be implemented, but delays in for instance tariff reforms could hinder the realisation of renewable energy	Active dialogue with policy makers and key stakeholders to inform and create awareness about the movements and demands in the renewable markets.	UNDP, BOI			

4	The Programme Board and the Agent fails to mobilize the necessary financing for the UNDP support programme	16 th July	Financial risk	Investments. P = 2 I = 5 In case the funding gap between the initially committed funds from UNDP and the real costs of programme implementation is not closed, the programme has to scale down activities and as a result impact on the ground will be sharply reduced.	Proactive strategic dialogue with key programme partners and potential donors from the outset of the programme, setting straight the expectations and objectives to be met.	UNDP, BOI				
5	Decreased engagement of Programme Board members and partners due to other priorities	16 th July	Strategic risk	P = 1 I = 4 The UNDP is dependent on collaborating with partners in order to design and implement the support programme activities. Lack of Project Board and partner engagement can impact the legitimacy and impact of the programme due to its multi-stakeholder nature.	Constructive long term partnerships created along the way, building on clear communication channels, mutual trust and commitment to results.	UNDP, BOI				
6	Continued financial and economic slowdown	16 th July	Financial risk	P = 2 I = 2 A continued financial crisis can impact the	The situation on the ground will be monitored and efforts will be made to identify ways of decreasing the risks	UNDP, BOI				

7	Unrest, crisis or natural disaster in Nigeria	16 th July	Political risk and natural hazard	<p>action oriented output of the programme by weak market demand and lack of MSMEs interest to make new investments and/or invest in riskier projects.</p> <p>P = 1 I = 2</p> <p>Unrest, crisis or natural disasters may jeopardize investments made in renewable energy</p>	perceived by MSMEs.	<p>Active monitoring at the situation at ground level should be carried out. Programme Board and partners should be immediately informed and consulted if an impact on output delivery is expected.</p>	UNIDP, BOI				
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VIII. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) 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;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

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 this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document 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/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document".