**Addendum to the UNDP-GEF Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings Project Document**

**United Nations Development Programme**

**Country: Republic of Mauritius**

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| **Project Title** | Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings and in Industry |
| **UNDAF Outcome(s):**  | N/A |
| **Expected CP Outcome(s):** *(Those linked to the project and extracted from the CP)* | National capacities of key institutions to implement global environmental commitments at national and regional levels through integration of environmental concerns in national policies and programmes improved  |
| **Expected Output(s):** *(Those that will result from the project)* | Capacity of the MEPU, EEMO and Ministry of Industry improved to address climate change mitigation |
| **Executing Entity:** |  |
| **Implementing Agencies:** | Ministry of Energy and Public Utilities (MEPU) |

**Brief Description**

The overall project goal is to reduce GHG emissions sustainably through a transformation of the building energy efficiency market for existing and new buildings as well as start to address priority issues in the industrial sector. The target is an accumulated total of 300,000 tonnes CO2eq over the next 10 years, i.e., horizon 2020. The project is intended to pursue the work started under the GEF project to overcome barriers to energy efficiency in buildings, and to reinforce the development of a market approach to improving energy efficiency in residential and non-residential buildings, in both existing stock and future buildings, and to extend the approach to industry. In setting out to do so, the project activities will ensure that energy is used cost effectively and rationally throughout the island, particularly in buildings and in industry. The project will continue to tackle market barriers in all three areas of a building’s energy use: building fabric, equipment, and people (behaviour) and will address those in industry. The project comprises of 5 components, Component 1: Development of additional regulations and codes for energy savings in buildings and industries, and operationalization of the EEMO, Component 2: Stimulating energy saving services and technology in the building and industrial sectors, Component 3: Capacity Building, Component 4: Development of a framework for energy savings in Industries, and Component 5: Monitoring, Learning, Adaptive Feedback and Evaluation

Programme Period: 2009-2012

Key Result Area (Strategic Plan) Environment and Sustainable Development

Atlas Award ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Start date: January 2012

End Date December 2012

PAC Meeting Date 17.11 2011

Management Arrangements NEX

Total resources required : 1.912 M USD

Total allocated resources : \_\_\_\_\_\_\_\_\_

* Regular \_\_\_\_\_\_\_\_\_
* Other :
	+ GEF 912,000 USD
	+ SIDS/Dock 1,000,000 USD
	+ Donor \_\_\_\_\_\_\_\_\_
	+ Government \_\_\_\_\_\_\_\_\_

Unfunded budget : \_\_\_\_\_\_\_\_\_

In-kind Contributions : 400,000 USD

 Agreed by (Government): Mr Ali Mansoor, Financial Secretary

Agreed by (Executing Entity): Mrs N. Nababsing, Permanent Secretary, MEPU

Agreed by (UNDP Country Office): Mrs Leyla Tegmo-Reddy, Resident Representative

**Situation Analysis**

1. Over the past decade, electrical energy demand in Mauritius has grown at an average annual cumulative rate of over 4.7%. The CEB forecasts that energy generation requirements will increase by approximately 32% over the next 10 years, equivalent to an average cumulative annual growth rate of over 2.8% and a peak demand increase by 15 MW per year between 2008 and 2025. Air conditioning and mechanical ventilation from commercial and residential buildings are major contributors to this growth, and currently account for a load of more than 40 MW during the day and 30 MW at night, about 10% of the current peak demand.
2. For the residential sector, additional 10,000 houses will need to be built annually until horizon 2020. Based on CEB historical data, the average household used about 1,874 kWh of electricity in 2008 and in 2011 used 1,982 kWh per year. Continuing the same trends, consumption per household is likely to be about 2,217 kWh in 2025. The household baseline consumption forecast in 2025 is thus likely to be approximately 1045 GWh per year.
3. With an effective demand side management (DSM) programme, which reduces growth by the targeted level of 10% of 2008 electricity consumption in the industrial, commercial and residential sectors by horizon 2025, Mauritius stands to save about 436,000 tonnes of imported coal over period 2012-2025, which is an equivalent saving of US$ 57 million in "hard currency" foreign exchange at today’s prices. Other savings include a delayed investment in new generation capacity. Globally such a DSM programme represents a reduction of up to 980,000 tonnes of CO2 equivalent. Out of this total potential, the UNDP/GEF and AOSIS project, with scope limited to buildings and certain industries is expected to achieve a reduction of up to 300,000 tonnes of CO2 equivalent.
4. Energy efficiency measures, products and services particularly related to buildings, which arguably are responsible for two-thirds of the electricity demand, are slowly penetrating the market in Mauritius despite the exponential growth of energy demand in the last decade. The cause for this relates to a number of interrelated market, policy, finance, business management skills, information and awareness as well as technology barriers. In order to overcome these barriers a series of measures are already being undertaken since July 2008 under the GEF/UNDP project on ‘Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings in Mauritius’.
5. Under the GEF project, the following have been achieved:
* An Energy Efficiency Bill has been enacted in March 2011; and, an Energy Efficiency Management Office (EEMO) has been set up under the Energy Efficiency Act. The EEMO will regulate energy audits of designated energy consumers in the building and industrial sectors;
* An Energy Audit Management Scheme (EAMS) documentation has been drafted;
* An a energy audit software tool, the Mauritius Building Energy Audit Tool (MBEAT), has been developed for the energy auditing of non-residential buildings in Mauritius;
* 45 Building Energy Auditors have been trained on the use of MBEAT, but the Energy Auditors have yet to be certified;
* A new Building Control Bill has been drafted, whereby inter-alia, an Energy Efficiency Building Code and an Energy Efficiency Building Regulations have been developed for the energy-efficient design of non-residential buildings with total gross floor area above 500 m2;
* Energy efficient design guidebooks for targeted residential and non-residential buildings of less than 500 m2 are being developed;
* MBEAT also remains to be customized to enable it to ensure compliance with the Energy Efficiency Building Code and Energy Efficiency Building Regulations.
1. As the implementation of the GEF/UNDP project is progressing, a number of gaps have been identified and cannot be implemented due to inadequate resources and lack of expertise being available locally.
2. These gaps relate to the preparation of new regulations, technical support in terms of tools and equipment and expertise to operationalize the EEMO, capacity building of service providers in the market stimulated by the GEF/UNDP project and provision of standardized software tools to professionals in the market, enhanced training of enforcement officers as required under the Energy Efficiency Act, subsidiary legislations in all the relevant institutions, local certification of already trained Energy Auditors, and further training of Energy Auditors in energy auditing and building code compliance. Furthermore, while the GEF/UNDP project targeted only the building sector, the beneficiary institution, the Ministry of Energy and Public Utilities (MEPU), in-keeping with its energy efficiency strategy, is willing to extend the scope of the project to target the industrial sector in Mauritius.
3. The need to address energy issues in industry, which accounts for more than 30 % of total electricity consumption and usage of other sources of energy such as fuel oil, coal and LPG, offers great potential for energy efficiency. Preliminary works, including energy usage surveys, have been undertaken at the level of the Ministry of Industry in conjunction with Enterprise Mauritius, a parastatal organization falling under the aegis of the same Ministry.
4. To achieve the targets set in the Long Term Energy Strategy, a two pronged approach is required addressing both the residential and non-residential buildings as well as the industrial sector. The proposed project will therefore pursue the works already initiated under the GEF project and address the gaps identified as well as complement the work started by the Ministry of Industry.
5. The complementary funding of the AOSIS/SIDSDOCK is therefore critical to ensure that the climate change mitigation goals of the Energy Efficiency project are met in a sustainable manner. In September 2011, the AOSIS/SIDSDOCK has agreed to provide assistance for that purpose to the tune of USD 1,000,000. This document details the actions to be undertaken under the AOSIS/SIDSDOCK project.

# Strategy

1. The project is intended to continue to overcome barriers to energy efficiency in buildings and address those in industries and to stimulate the market for energy efficiency in non-residential buildings, both existing stock and future buildings, and in the industrial sector. In setting out to do so, the project activities will ensure that energy is used cost effectively and rationally throughout the island. The project will allow for the completion and reinforcement of the ongoing initiatives under the GEF/UNDP project to tackle market barriers in energy efficiency in the non-residential buildings, and will be extended to the industrial sector as well.

**Project rationale and policy conformity**

1. The project’s goal is to reduce GHG emissions by reinforcing the legal, regulatory and market environment and strengthening institutional, administrative and technical capacities to promote the utilization of energy-efficient technologies in buildings and in industry. The objective is to continue to assist the Government of Mauritius (GOM) in comprehensively addressing the various barriers to energy efficiency with a view to achieving its target of 6% gain in energy efficiency by 2020 as compared to the baseline of 2008, which is outlined in the “Long Term Energy Strategy 2009-2025”. Such a target can only be achieved if practitioners and professionals in energy efficiency swiftly adopt good practices and technologies within the set timeframe, that is by end 2012.
2. The project will accomplish its objectives by supporting the Government of Mauritius in:
	* Enabling the completion of the necessary institutional and legal framework for energy efficiency in buildings and in industry
	* Building human and technical capacity at the level of relevant institutions so as to create the necessary framework for training, accreditation and certification of energy auditors in energy auditing according to the Energy Audit Management Scheme (EAMS), and the Energy Efficiency Building Code
	* Developing and customizing standard energy audit software tools for use by practitioners and professionals in the ongoing stimulated market of energy efficiency
	* Building capacity within the energy efficiency market to carry out the required energy audits and to design the necessary energy efficiency measures which are suited to the local conditions and to the new legal framework; also, building capacity of the newly created institution, the EEMO, for effective enforcement of the energy efficiency legal framework
	* Providing selected energy intensive industries (dyeing/textile, plastic, agro) with guidelines for energy efficiency measures
	* Implementation of the Contingent Support Mechanism for energy audits in non-residential buildings that has been started in the GEF Energy Efficiency project, and extending it to the industrial sector

**Institutional Structure**

1. The MEPU is the central body responsible for formulating and implementing the Government’s policy in the field of energy. In the specific area of energy efficiency, MEPU is entrusted with formulating policy, plans and programmes for the management of the energy sector. Under the newly enacted Energy Efficiency Act, the Energy Efficiency Management Office (EEMO), falling under the MEPU will be responsible for the field of energy efficiency in Mauritius. The Central Electricity Board, responsible for generation, transmission, distribution and sale of electricity, also operates under the general purview of the MEPU.
2. The MEPU has also been entrusted with the formulation and implementation of energy efficiency measures in the country and, as such, is directly responsible for implementing the on-going UNDP-GEF project entitled “Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings” and it would be so with the support of the EEMO for the AOSIS/SIDSDOCK project, the scope of which now also includes the industrial sector.
3. The Ministry of Industry, Commerce and Consumer Protection is responsible for matters concerning the regulation of the industrial sector in Mauritius and making the industry globally competitive. The parastatal organization, Enterprise Mauritius, falls under the responsibility of the Ministry of Industry. One of the ways of making the Mauritian industry more competitive is to decrease the cost of energy usage in the sector..
4. The Ministry of Public Infrastructure, National Development Unit, Land Transport & Shipping is *inter-alia* responsible for regulating the building sector and as such is in charge of preparing and enacting the new Building Control Bill. The mission of the Ministry as regards buildings is to fulfill the needs of the nation in the design, construction, maintenance and repair of roads, bridges and government buildings by ensuring the provision of functional, aesthetic and environment-friendly structures conforming to high construction standards.
5. In view of ensuring the sustainability of the energy efficiency services market, it is important that there are mechanisms for the certification and accreditation of professionals in the field. The Mauritius Standards Bureau is the agency responsible for promoting quality standards and assurance in the country and under the project will be the initial body empowered to certify energy auditors. The MAURITAS is the local accreditation authority and it will be empowered to accredit any agency interested in certifying energy auditors, including MSB.

**Country ownership: country eligibility and country drivenness**

1. The implementation of demand side management measures is a central plank of the energy policy of the Government of Mauritius (GOM). The Long Term Energy Strategy 2009-2025 puts great emphasis on energy efficiency as one of the important mitigation options that the GOM is committed to pursue for reducing greenhouse gas emissions in the country and enhancing the country’s energy resilience. The project is also in line with national priorities as outlined in the National Environmental Policy of 2007 of the then Ministry of Environment and National Development Unit (presently Ministry of Environment and Sustainable Development), viz.:
* This policy aims at adopting Sustainable Consumption and Production patterns to ensure efficient use of energy and environmental resources
* For the energy markets, the aim of the policy is to achieve significant energy conservation in all sectors of the economy in the short-to-medium term

**Design principles and strategic considerations**

1. The project will further develop and strengthen the approach initiated under the UNDP-GEF “Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings” project to promote a market-driven approach to energy efficiency in Mauritius. In addition, the scope of the project will be extended to include energy efficiency in selected energy intensive industries.

**Project objective, outcomes and outputs/activities**

1. The project consists of five components as outlined below. It is recognised that on-the-job training will be provided by the recruited consultants, both local and international, during the normal course of their support to the relevant project activities. This will be in addition to Component 3, which, deals with capacity development on legal enforcement and technical issues required by key Government and private energy efficiency practitioners and professionals. Moreover, the project will seek to achieve an inclusive approach by promoting gender equality through the empowerment of women and also attempt if possible to include participants from more vulnerable strata of society to fully participate in project activities and specifically those related to capacity development under the various components.

**Component 1: Development of additional regulations and codes for energy savings in buildings and industries, and operationalization of EEMO**

This outcome will be achieved through the following outputs:

* Drafting of regulations to designate consumers for mandatory energy audits
* Drafting of regulations for enforcement of the EAMS in the Building Sector
* Development of all administrative tools and procedures for EEMO
* Sustainability planning for EEMO including long-term mandate, staffing and internal procedures, budget plan in line with the Programme Based Budgeting System and resource requirement
* Review adequacy of all regulations and drafting of additional necessary regulations to allow for the operationalization and proper functioning of EEMO

**Component 2: Stimulating energy saving services and technology in the building and industrial sectors**

This outcome will be achieved through the following outputs:

* Creation and setting up of an Energy Audit Databank and National Registry at EEMO for the lodging of energy audit assessments, list of Certified Energy Auditors, Building Energy Efficiency Certificates, etc.., including the benchmarking of different categories of buildings. It will also include the provision of necessary computer hardware including communication links with relevant operators in the field. This central registry will be the nexus of the field of energy efficiency in the country.
* Customize MBEAT Software to allow for compliance checking as per requirements of the Energy Efficiency Building Regulations and Code by incorporating a dedicated module to the software for this additional functionality.
* Drafting of supplementary documentation for the Energy Audit Management Scheme (EAMS) to include compliance checking using the MBEAT customized as per requirements of the new Energy Efficiency Building Regulations and Code.
* Development of a standard Software tool for energy audits of Industrial Processes.
* Implementation of the Contingency Support Mechanism started in the GEF Energy Efficiency project for energy audits in 5 non-residential buildings using the MBEAT and 10 industrial entities on a cost sharing basis and an obligation of the beneficiaries to implement identified measures in the audits which have short pay back or which are cost-effective

**Component 3: Capacity Building**

This outcome will be achieved through the following outputs:

* Further training of Energy Auditors, Compliance Officers, Enforcement Officers, and other Professionals of the building sector in Mauritius and in Rodrigues.
* Interim Certification of the 45 Trained Building Energy Auditors by an International Accredited Certification Body
* Capacity Building of MSB (Mauritius Standard Bureau) to be a Certification Body for Building Energy Auditors, both in energy audits and in compliance checking as per requirements of the new Energy Efficiency Building Regulations and Code
* Capacity Building of MAURITAS to accredit MSB to ISO 17024 as the Certification Body for Building Energy Auditors
* Further training of future trainers, examiners and MSB Energy Auditors including the development of training and exam materials for the purpose of certification and accreditation locally in both energy auditing and compliance in the building sector
* Comprehensive training of Energy Auditors and Compliance Officers of the Municipal and District Councils on the use of MBEAT customized for compliance checking as per the requirements of the Energy Efficiency Building Regulations and Code
* Training of all technical and administrative staffs for EEMO on the use of the administrative tools and procedures that will be developed
* Training of Energy Auditors and Energy Managers in industry

**Component 4: Development of a Framework for Energy Savings in Industries**

This outcome will be achieved through the following outputs:

* Review of the scheme of preliminary surveys and energy audits done by Enterprise Mauritius
* Development of Guidelines for energy audits in Industries
* Development of a code of good practice for Energy Managers in Industries

**Component 5: Monitoring, learning, adaptive feedback and evaluation**

This outcome will be achieved through the following outputs:

* Monitoring and Evaluation Work Plan implemented
* Lessons learned collected, prepared and disseminated

**II**  **Financing Plan, Cost Effectiveness, Co-financing, Co-financiers**

1. **Budget Allocations**

|  |  |  |  |
| --- | --- | --- | --- |
| Project Components/Outcomes | **GEF ($)** | **SIDSDOCK** | **Total ($)** |
| 1. Development of additional regulations and codes for energy savings in Buildings and Industries, and operationalization of EEMO | 279,250 | 45,000 | 324,250 |
| 2. Stimulating energy savings services and technology in the building and industrial sectors | 428,000 | 340,000 | 768,000 |
| 3. Awareness/Capacity Building | 71,669 | 360,000 | 431,669 |
| 4. Development of a framework for energy savings in Industries | 0 | 95,000 | 95,000 |
| 5. Monitoring, learning, adaptive feedback and evaluation | 83,492 | 30,000 | 113,492 |
|  Project management \* | 50,000 | 80,000 | 130,000 |
| **Total project costs** | **912,411** | **950,000** | **1,862,411** |

**\*This item is the aggregate cost of project management; the breakdown of the aggregate amount is**

 **presented in table b) below. The remaining amount of USD 50,000 will be the payment fee for UNDP.**

**b) Breakdown of Budget Allocated to Project Management**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | **Estimated Staff weeks** | **GEF ($)** | **SIDS Dock ($)** | **Project Total ($)** |
| National Project Director (Locally recruited personnel\*) | 150 |  |  | 90,000 |
| Technical Advisor (Locally recruited personnel\*) and Project Manager | 150 | 44,611 | 70,000 | 114,611 |
| Office facilities, equipment, vehicles and communications |  | 3,389 | 5,000 | 8,389 |
| Travel |  | 0 | 2,000 | 2,000 |
| Miscellaneous |  | 2,000 | 3,000 | 5,000 |
| **Total project management cost** |  | **50,000** | **80,000** | **220,000** |

 **\*Locally recruited personnel/consultants in this table are hired for functions related to the management of project only. Consultants who are hired to do a special task are referred to as providing technical assistance and details of their services are provided in table c) below:**

**c) Consultants working for technical assistance components:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Component** | **Estimated Person Weeks****(GEF)** | **GEF ($)****(2006 figure)** | **Estimated Person Weeks****(SIDS/DOCK)** | **SIDS/DOCK ($)****(2011 figure)** | **Project Total ($)** |
| Personnel |  |  |  |  |  |
| Local Consultants | 501 | 233,611 | 220 | 220,000 | 453,611 |
| International Consultants | 84 | 252,000 | 150 | 515,000 | 767,000 |
| **Total** | **585** | **485,611** | **370** | 735,000 | 1,220,611 |

**For all consultants hired to manage the project or to provide technical assistance, a description in terms of their person-weeks, roles and functions in the project and their position titles are given at Annex A**

**d) Co-financing Sources**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of Co-financier (source)** | **Classification** | **Type** | **Amount** |
| **Confirmed ($)** | **Unconfirmed ($)** |
| Ministry of Energy & Public Utilities | National Government | In Kind\* | 400,000 |  |
| **Total Co-financing** |  |  | **400,000** | **0** |

**\*Salaries of National Project Director and Project Manager, office facilities and local transport.**

# Results and Resources Framework

|  |
| --- |
| **Intended Outcome as stated in the Country Programme Results and Resource Framework:**  |
| **Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:** |
| **Applicable Key Result Area :** |
| **Partnership Strategy :** |
| **Project title and ID (ATLAS Award ID): Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings and in Industry** |
| **OUTCOME 1** | **OUTPUT TARGETS FOR (2012)** | **INDICATIVE ACTIVITIES** | **RESPONSIBLE PARTIES** | INPUTS |
| **Drafting of additional Regulations and Codes for energy savings in Buildings and Industries, and operationalization of EEMO** | Baseline:* Energy Audit Management Scheme not yet operational
* Energy Audits not yet mandatory for Designated Consumers
* EEMO not yet operational

Indicators:* EAMS Regulations
* Report on sustainability planning of EEMO
* Administrative tools and procedures developed for EEMO
* Regulations of designated consumers for mandatory energy audits
* Report on adequacy of existing regulations
 | * Drafting of regulations to designate consumers for mandatory energy audits
* Drafting of regulations for enforcement of the EAMS in the Building Sector
* Development of all administrative tools and procedures for EEMO
* Sustainability planning for EEMO including long-term mandate, staffing and internal procedures, budget plan in line with the Programme Based Budgeting System and resource requirement
 | MEPU/EEMO  | 45,000 |
| **OUTCOME 2** | **OUTPUT TARGETS FOR (2012)** | **INDICATIVE ACTIVITIES** | **RESPONSIBLE PARTIES** | INPUTS |
| **Stimulating energy saving services and technology in the building and industrial sectors** | Baseline:* Mauritius Building Energy Audit Tool (MBEAT) developed for energy auditing of non-residential buildings
* Initial batch of 45 Building Energy Auditors trained on the use of MBEAT
* MBEAT not yet customized for compliance checking as per requirements of the Energy Efficiency Building Code and Regulations
* Contingent Support Mechanism for energy audits not yet available

Indicators:* Energy Audit Databank and National Registry created at the EEMO
* MBEAT customized for compliance checking as per requirements of the Energy Efficiency Building code and Energy Efficiency Building Regulations
* Energy Audit Reports
* Standard Software Tool for Energy Audits of Industrial Processes developed
* Compliance Certificates issued by Energy Auditors using customized MBEAT
 | * Creation and setting up of an Energy Audit Databank and National Registry at EEMO for the lodging of energy audit assessments, list of Certified Energy Auditors, Building Energy Efficiency Certificates, etc.., including the benchmarking of different categories of buildings. This will include the provision of necessary computer hardware including communication links with relevant operators in the field. This central registry will be the nexus of the field of energy efficiency in the country.
* Customize MBEAT Software to allow for compliance checking as per requirements of the Energy Efficiency Building Regulations and Code by incorporating a dedicated module to the software for this additional functionality.
* Drafting of supplementary documentation for the Energy Audit Management Scheme (EAMS) to include compliance checking using the MBEAT customized as per requirements of the new Energy Efficiency Building Regulations and Code.
* Development of a standard Software tool for energy audits of Industrial Processes.
* Implementation of the Contingency Support Mechanism started in the GEF Energy Efficiency project for energy audits in 5 non-residential buildings using the MBEAT and 10 industrial entities on a cost sharing basis and an obligation of beneficiary to implement identified measures in the audits which have short pay back or which are cost-effective
 | MEPU/EEMO, MSB, MPI, Local Authorities, Ministry of Industry | 340,000 |
| **OUTCOME 3** | **OUTPUT TARGETS FOR (2012)** | **INDICATIVE ACTIVITIES** | **RESPONSIBLE PARTIES** | **INPUTS** |
| **Capacity**  **Building** | Baseline:* Initial batch of 45 trained Building Energy Auditors not yet certified.
* MBEAT for compliance checking not yet available
* MSB not yet the Certification Body
* MAURITAS not yet the Accreditation Body

Indicators:* Number of trained Building Energy Auditors certified
* Number of training Courses and workshops completed
* Both technical and administrative staff of EEMO trained and EEMO operational
* Training and exam materials developed
* MSB can run certification scheme of energy auditors
* MAURITAS can accredit MSB
* EEMO has all tools and procedures in place to deliver its obligations
 | * Further training of Energy Auditors, Compliance Officers, Enforcement Officers, and other Professionals of the building sector in Mauritius and in Rodrigues.
* Interim Certification of the 45 Trained Building Energy Auditors by an International Accredited Certification Body
* Capacity Building of MSB (Mauritius Standard Bureau) to be a Certification Body for Building Energy Auditors, both in energy audits and in compliance checking as per requirements of the new Energy Efficiency Building Regulations and Code
* Capacity Building of MAURITAS to accredit MSB to ISO 17024 as the Certification Body for Building Energy Auditors in both auditing and compliance
* Further training of future trainers, examiners and MSB Energy Auditors/Assessors including the development of training and exam materials for the purpose of certification and accreditation locally in both energy auditing and compliance in the building sector
* Comprehensive training of Energy Auditors and Compliance Officers of the Municipal and District Councils on the use of MBEAT, customized for compliance checking as per the requirements of the Energy Efficiency Building Regulations and Code
* Training of all technical and administrative staff of the EEMO in the use of the administrative tools and procedures that will be developed
* Training of Energy Auditors and Energy Managers in industry
 | MEPU/EEMO, MSB, MAURITAS, MITD, Local Authorities, Ministry of Industry | 360,000 |
| **OUTCOME 4** | **OUTPUT TARGETS FOR (2012)** | **INDICATIVE ACTIVITIES** | **RESPONSIBLE PARTIES** | **INPUTS** |
| **OUTCOME 5** | **OUTPUT TARGETS FOR (2012)** | **INDICATIVE ACTIVITIES** | **RESPONSIBLE PARTIES** | **INPUTS** |
| **Monitoring, learning, adaptive feedback and evaluation** | Baseline:Ongoing reporting under GEF/UNDP projectIndicators:* Monitoring and evaluation work plan as per UNDP requirements
* Lessons learned disseminated both locally and externally
 | * Monitoring and Evaluation Work Plan implemented
* Lessons learned collected, prepared and disseminated
 | MEPU/EEMO, UNDP CO | Regional Coordination Unit of UNDP will provide technical backstopping 30,000 |
| **Project Management** |  | * Project Management team reinforced and execute their functions and tasks
* Local technical adviser recruited
 | MEPU/EEMO, UNDP CO | 80,000 |

# Annual Work Plan

**Year: 2012**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outputs** | **ACTIVITY NO.** | **PLANNED ACTIVITIES** | **TIMEFRAME** | **RESPONSIBLE PARTY** | **PLANNED BUDGET** |
| Q1 | Q2 | Q3 | Q4 | Funding Source | Budget Description | Amount (USD) |
| **Component 1**Drafting of additional Regulations and Codes for energy savings in Buildings and Industries, and operationalization of EEMO  | 1.1 | Drafting of regulations to designate consumers for mandatory energy audits |  |  |  |  | MEPU/EEMO | AOSIS | In Cash | 5,000 |
| 1.2 | Drafting of regulations for enforcement of the EAMS in the Building Sector  |  |  |  |  | MEPU/EEMO, MPI and Local Authorities | AOSIS | In Cash | 5,000 |
| 1.3 | Sustainability planning of EEMO |  |  |  |  | MEPU/EEMO | AOSIS | In Cash | 10,000 |
| 1.4 | Development of all administrative tools and procedures for EEMO  |  |  |  |  | MEPU/EEMO | AOSIS | In Cash | 15,000 |
| 1.5 | Review adequacy of all regulations and drafting of additional necessary regulations to allow for the operationalization and proper functioning of EEMO |  |  |  |  | MEPU/EEMO | AOSIS | In Cash | 10,000 |
| **Component 2**Stimulating energy saving services and technology in the building and industrial sectors  | 2.1 | Setting up of an Energy Audit Databank and National Registry at EEMO |  |  |  |  | MEPU/EEMO, MSB, Ministry of Industry | AOSIS | In Cash | 110,000 |
| 2.2 | Customize MBEAT Software to allow for compliance checking as per requirements of the Energy Efficiency Building Regulations and Code  |  |  |  |  | MEPU/EEMO, MSB, MPI, Local Authorities | AOSIS | In Cash | 50,000 |
| 2.3 | Drafting of supplementary documentation for the Energy Audit Management Scheme (EAMS) to include compliance checking using the customized MBEAT  |  |  |  |  | MEPU/EEMO, MPI, MSB | AOSIS | In Cash | 15,000 |
| 2.4 | Development of a standard Software tool for energy audits in Industries |  |  |  |  | MEPU/EEMO, Ministry of Industry | AOSIS | In Cash | 35,000 |
| 2.5 | Implementation in at least 5 non-residential buildings and 10 industrial entities under the Contingent Support Mechanism for energy audits and feasibility studies started under the GEF Programme  |  |  |  |  | MEPU/EEMO, Ministry of Industry | AOSIS | In Cash | 130,000 |
| **Component 3**Capacity Building  | 3.1 | Further training of Energy Auditors, Compliance Officers, Enforcement Officers, and other professionals of the building sector in Mauritius and in Rodrigues |  |  |  |  | MEPU/EEMO, MPI, Local Authorities | AOSIS | In Cash | 30,000 |
| 3.2 | Interim Certification of 45 Trained Building Energy Auditors |  |  |  |  | MEPU/EEMO, MSB | AOSIS | In Cash | 60,000 |
| 3.3 | Capacity Building of MSB Scheme Trainers and Technical Managers on EAMS for certification of building energy auditors in both auditing and compliance |  |  |  |  | MEPU/EEMO, MSB | AOSIS | In Cash | 90,000 |
| 3.4 | Capacity Building of MAURITAS on accreditation of EAMS to ISO 17024 |  |  |  |  | MEPU/EEMO, MAURITAS | AOSIS | In Cash | 80,000 |
| 3.5 | Further training of future Trainers, Examiners and MSB Energy Auditors/Assessors for certification purposes |  |  |  |  | MEPU/EEMO, MSB, MITD | AOSIS | In Cash | 10,000 |
| 3.6 | Comprehensive training on the use of MBEAT customized for compliance checking as per requirements of Energy Efficiency Building Regulations and Code |  |  |  |  | MEPU/EEMO, MSB, MPI, Local Authorities | AOSIS | In Cash | 30,000 |
| 3.7 | Training of all Technical and Administrative Staff of EEMO on the use of the administrative tools and on the procedures that will be developed |  |  |  |  | MEPU/EEMO | AOSIS | In Cash | 20,000 |
|  | 3.8 | Training of Energy Auditors and Energy Managers in Industry |  |  |  |  | MEPU/EEMO, Ministry of Industry/Enterprise Mauritius | AOSIS | In Cash | 40,000 |
| **Component 4**Development of a framework for energy savings in Industries | 4.1 | Review of the scheme of preliminary surveys and energy audits done by Enterprise Mauritius |  |  |  |  | MEPU/EEMO, Ministry of Industry/ Enterprise Mauritius | AOSIS | In Cash | 20,000 |
| 4.2 | Development of Guidelines for energy audits in Industry |  |  |  |  | MEPU/EEMO, Ministry of Industry/ Enterprise Mauritius | AOSIS | In Cash | 60,000 |
| 4.3 | Development of a code of good practice for Energy Managers in industry |  |  |  |  | MEPU/EEMO, Ministry of Industry/ Enterprise Mauritius | AOSIS | In Cash | 15,000 |
| **Component 5** Monitoring, learning, adaptive feedback and evaluation | 5.1 | Monitoring and Evaluation work plan implemented |  |  |  |  | MEPU/EEMO,UNDP CO | AOSIS | In Cash | 15,000 |
| 5.2 | Lessons learned collected, prepared and disseminated |  |  |  |  | MEPU/EEMO, UNDP CO | AOSIS | In Cash | 15,000 |
| **Project Management** |  | Project Management team recruited |  |  |  |  | MEPU/EEMO, UNDP CO | AOSIS | In Cash | 80,000 |
| **TOTAL** |  |  |  |  |  |  |  |  |  | **950,000** |

# Management Arrangements

The Project Management Structure will be the same as that of the UNDP/GEF project, in-keeping with the model below.

**Project Manager**

**Project Board**

**Senior Beneficiary**

**Executive**

**Senior Supplier**

**Project Assurance**

(by Board members or delegated to other individuals)

**Project Support**

**Project Organisation Structure**

**TEAM A**

**TEAM C**

**TEAM B**

 **Project Implementation Arrangement**

The project will be nationally executed with UNDP Country Office Support (Country Support to NEX modality). The MEPU will be the Executing agency for the project. A Project Management Unit (PMU) already exists within MEPU for the implementation of the GEF/UNDP project and will be responsible for implementation of the AOSIS/SIDSDOCK project. The PMU will be responsible for the delivery of all project outputs through direct action or hiring of necessary experts.

The National Steering Committee (NSC) which has already been established to provide expert and technical guidance to the PMU in the implementation of the GEF/UNDP project will do so for the AOSIS/SIDSDOCK project. The NSC is chaired by the National Project Director (MEPU) and will include representatives from the MEPU, the State Law Office, UNDP and other new relevant stakeholders such as the Ministry of Industry and Enterprise Mauritius. This NSC gives advice to the Project Manager, thus supporting the decision-making process. Ultimate responsibility for day-to-day decisions lies with the PMU, which equally carries the responsibility for delivery of project outputs.

The project implementation structure is shown diagrammatically below:

Project Management Unit (PMU)

Already Established within the Ministry of Energy & Public Utilities

Ensures project management and delivery of all outputs through direct actions and subcontracting to national and international experts

National Steering Committee (NSC)

Chairperson of NSC: National Project Director

Secretary of NSC: Project Manager

# Monitoring Framework And Evaluation

***Project inception phase***

A Project Inception Workshop will be conducted with all stakeholders, including the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate.

The objective of this Inception Workshop will be to enlighten all stakeholders on the interface and complementary aspects of the GEF/UNDP project with that of the AOSIS/SIDSDOCK and take ownership of the extended project’s goals and objectives, as well as finalize preparation of the project's annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional details as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

The IW will also provide an opportunity to refresh all parties on their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify where required, each party’s responsibilities during the project's implementation phase.

***Monitoring responsibilities and events***

A detailed schedule of project review meetings will be developed by the Project Management Unit (PMU), in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) a tentative time frames for National Steering Committee (NSC) meetings and (ii) project-related monitoring and evaluation (M&E) activities.

Day-to-day monitoringof implementation progresswill be the responsibility of the Project Manager based on the project's Annual Work plan (Strategic Planning Matrix) and its indicators. The PMU will inform the UNDP CO and Ministry of Energy and Public Utilities (MEPU) of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

Periodic monitoringof implementation progresswill be undertaken by the National Steering Committee (NSC) through quarterly meetings with the MPU and UNDP Country Office (or more or less frequently as deemed necessary). This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

The UNDP Country Office and the UNDP-GEF Regional Coordination Unit (RCU) are responsible for monitoring the project on a continuous basis and can conduct, as appropriate, visits to the project and field sites to assess first hand project progress. Any other member of the National Steering Committee (NSC) can also accompany, as decided by the Committee. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all NSC members and UNDP-AOSIS/SIDSDOCK.

Annual Monitoring will occur through the Annual Project Report (APR/PIR). The APR/PIR will highlight policy issues and recommendations for the decision of the NSC participants. The Project Manager also informs the project participants of any agreement reached by stakeholders during the APR/PIR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

***Project reporting***

The Project Manager will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a), (b), (c) and (f) as hereunder are mandatory and strictly related to monitoring, while (d) and (e) have a broader function and the frequency and nature is project-specific to be defined throughout implementation.

*a)* A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/Annual Work Plan (AWP) divided in quarterly time frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This AWP would also include the dates of specific field visits and support missions from UNDP CO or RCU staff or Technical Advisors. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related (co-financing) partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the Inception Report, the UNDP Country Office and UNDP Regional Coordinating Unit will review the document.

*b)* As deemed necessary by the PMU and/or when called for by UNDP (AOSIS/SIDSDOCK) or the NSC, the Project Manager will prepare Thematic Reports, focusing on specific issues or areas of activity or Technical Reports, detailed documents covering specific areas of analysis or scientific specializations within the overall project. If requested by UNDP or P\NSC, the request for a project report will be provided to the project team in written form by UNDP, clearly state the issue or activities that need to be reported on and allow reasonable timeframes for their preparation by the project team.. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. Two specific technical reports linked with monitoring are the baseline and end-of-project impact studies.

*c)* Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project and its lessons learnt. These publications are informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports or may be summaries or compilations of a series of Technical Reports and other research. The National Steering Committee will determine if any of the Project or Technical Reports merit formal publication and the Project Manager will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

*d)* Project Completion Report. During the last three months of the Project Manager will prepare the Project Completion Report. This comprehensive report will summarize all activities, achievements and outputs, objectives met (or not achieved!) of the Project, as well as lessons learnt and structures and systems implemented. It will also lay out recommendations for any further steps that need to be taken to ensure sustainability and replicability of the project’s activities.

In accordance with the programming policies and procedures outlined in the UNDP User Guide, the project will be monitored through the following:

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 Project Manager to facilitate tracking and resolution of potential problems or requests for change.
* Based on the initial risk analysis submitted (see Annex B), 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.
* 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 Project Manager and shared with the Project Board (NSC) and the Outcome 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 Project 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, if applicable, This review will be a final assessment. This review is driven by the Project Board (NSC) 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.

**Periodic Monitoring through site visits**

UNDP CO will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the NSC may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Steering Committee members.

**Mid-term of project cycle**

The GEF project has undergone an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Evaluation has determined progress being made toward the achievement of outcomes. Findings of this review have been incorporated in this project design.

**End of Project**

An independent Final Evaluation will take place three months prior to the final National Steering Committee meeting and will be undertaken in accordance with UNDP, GEF and AOSIS/SIDSDOCK guidance. The final evaluation will focus on the delivery of the project’s results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF and AOSIS SIDS DOCK.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Center (ERC)](http://erc.undp.org/index.aspx?module=Intra).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project’s results.

**Learning and knowledge sharing**

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

# Legal Context

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Mauritius and the United Nations Development Programme, signed by the parties on 29 August 1974. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

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

The executing agency shall:

1. 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;
2. assume all risks and liabilities related to the executing agency’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 executing agency 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.

The UNDP Resident Representative in Mauritius is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;

b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

d) Inclusion of additional annexes and attachments only as set out here in this Project Document

# ANNEXES

**Annex A: Total BUDGET AND WORK PLAN**

**Annex B: Key indicators, assumptions, and risks**

**Annex C: Logical Framework (SIDS/DOCK)**

**Annex D: Terms of Reference of project staff (Project management unit)**

 **and National Steering Committee**

**ANNEX A**

|  |
| --- |
| **Total Budget and Work Plan** |
| **Award ID:**  |  |
| **Project ID:** |  |
| **Award Title:** |  |
| **Business Unit:** |  |
| **PIMS Number**  |  |
| **Project Title:** | Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings and in Industry |
| **Implementing Partner (Executing Agency)**  | **Ministry of Energy and Public Utilities (NEX)** |
| **Outputs** | **Responsible Party** | **Fund ID** | **Donor Name** | **Atlas Budgetary Code** | **Atlas Budget Description** | **Amount Year 1 (USD)** | **Notes** |
| **Component 1**Development of additional regulations and codes for energy savings | MEPU/EEMO |  | AOSIS | 71200 | International Consultants | 10, 000 | 1) |
| 71300 | Local Consultants | 30,000 | 2) |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Outcome 1** | **45,000** |  |
| **Component 2**Energy saving services and technology stimulated | MEPU/ EEMO |  | AOSIS | 71200 | International Consultants | 95,000 | 3) |
| 71300 | Local Consultants | 130,000 | 4) |
| 72200 | Equipment/Software | 110,000 | 5) |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Outcome 2** | **340, 000** |  |
| **Component 3**Capacity Building for the Energy Efficiency Sector | MEPU/ EEMO |  | AOSIS | 71200 | International Consultants | 335,000 | 6) |
| 71300 | Local Consultants | 20,000 | 7) |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Outcome 3** | **360, 000** |  |
| **Component 4**Energy Saving in Industry-Development of a framework  | MEPU/ EEMO |  | AOSIS | 71200 | International Consultants | 60,000 | 8) |
| 71300 | Local Consultants | 30,000 | 9) |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Outcome 4** | **95,000** |  |
| **Component 5**Monitoring and Evaluation  | MEPU/ EEMO |  | AOSIS | 71200 | International Consultants | 15,000 | 10) |
| 71300 | Local Consultants | 10,000 | 11) |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Outcome 5** | **30,000** |  |
| **Project Management**  | MEPU/EEMO |  | AOSIS | 71400 | Project Manager | 20,000 |  |
| 71400 | Technical advisor | 50,000 |  |
| 72200 | Equipment | 5,000 |  |
| 71600 | Travel | 2,000 |  |
| 74500 | Miscellaneous | 3,000 |  |
| **TOTAL Management** | **80,000** |  |

1. Costs of one international consultant to be employed for specific tasks under Component 1.
2. Costs of four local consultants to be employed for specific tasks under Component 1.
3. Costs of five international consultants to be employed for specific tasks under Component 2.
4. Costs of five local consultants to be employed for specific tasks under Component 2.
5. Computing equipment and software programmes for the creation the Energy Audit Databank including communication links with relevant operators on the field, for the development of software for Energy Audits in Industry, etc.
6. Cost of seven international consultants to implement specific tasks under Component 3.
7. Costs of two local consultants to be employed for specific tasks under Component 3.
8. Costs of one international consultant to be employed for specific tasks under Component 4.
9. Costs of one local consultant to be employed for specific tasks under Component 4.
10. Costs of one international consultant to be employed for specific tasks under Component 5.
11. Costs of one local consultant to be employed for specific tasks under Component 5.

Summary of Funds

|  |  |
| --- | --- |
| **Description** | **Amount** |
| International consultants | 515,000 |
| Local Consultants | 220,000 |
| Project Management | 70,000 |
| Equipment/software | 115,000 |
| Travel | 12,000 |
| Miscellaneous | 18,000 |
| **Total** | **950,000** |

**ANNEX B: Key indicators, assumptions, and risks**

1. Key indicators of performance of the project include those listed below:

*Environmental:*

* Reduction in direct GHG emissions and reduced energy consumption associated with more energy-efficient investments and better energy efficiency practices in commercial and residential buildings and in industries

*Regulatory and institutional:*

* Number of regulations and building codes developed, enacted and enforced as percentage of building permits issues
* Compliance rate to building codes and regulations
* Availability and quality of guidelines on appliances and in industry
* All regulations are enforced
* Code of Practice developed for Energy Managers in Industries
* Strengthened institutional capacity at government level with the operation of the Energy Efficiency Management Office

*Capacity building:*

* Number of Professionals of the building and Industrial Sectors who have been trained
* Certified Building Energy Auditors
* Trained Energy Auditors and Energy Managers in Industries
* Number of commercial actors and service providers in building energy saving sector increased
* Increased awareness and acceptance by private sector and end-users regarding energy savings in buildings, appliances and industry

*Energy audits*

* Number of audits in buildings and industry being implemented (under the audit scheme)

2. Important project assumptions include:

* Effective enforcement of regulations and standards is sustainably maintained after the end of the project
* Project support is consistent throughout project by government and donors and afterwards by government
* Electricity prices remain stable or continue to rise and act as an incentive for investment in energy savings
* Ongoing support from government and concerned stakeholders
* Regulations developed by stakeholders are adopted by government
* Ongoing growth or sustaining of energy (electricity) prices

3. Risks and remedial actions are summarized in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Risks** | **Type** | **Likelihood** | **Remedial actions** |
| 1. Lack of ongoing, long term political and government support for building energy efficiency | Exogenous | Low | Ongoing consultations and ownership of project development and implementation, with key government stakeholders; establishment of EEMO is in progress already, which is ample testimony of project ownership. |
| 2. Government puts back subsidies for electricity, thereby reducing market signals for energy saving | Exogenous | Low | With regards to electricity tariffs, government plans to establish an independent regulatory authority for independent setting of electricity rates. The already ongoing policy dialogue through the UNDP/GEF project has helped to reinforce the importance of cost recovery in the sector. Lifeline tariffs if deemed necessary for very low income households will not have a significant impact on this project. At any rate, Government does not subsidize electricity prices. |
| 3. Low fossil fuel prices | Exogenous | Low | Since Mauritius imports all fossil fuels they come at a premium price. Coal, which will be required for future growth in base-load capacity as well as in the sugar industry out of harvest season is imported from South Africa and prices are more stable. Oil, which is required for peak-load is likely to maintain high prices with huge growth in India and China markets. |
| 6. Poor cooperation between stakeholders | Endogenous | Medium | Highly participatory project development and implementation strategy, with specific incentives to key institutions. Workshops will be organized to foster co-operation. Consultation has been carried out at project design stage |
| 7. Withdrawal of baseline funding | Endogenous | Medium | Government commitments in this area have been confirmed on the highest level and they have been committed over some time to energy efficiency, and financial resources have been committed for the functioning of the EEMO |
| 8. Inadequate project implementation | Endogenous | Medium | Careful selection of project team members and the M&E are already in place. The project design aims to minimise institutional bureaucracy through private-sector representation at the level of the NSC. |
| 9. Cost overrun and time delays | Endogenous | Medium | Negotiation of fixed price “turnkey” contracts with experts will be required.  |
| 10. Use of inappropriate technologies | Endogenous | Low | Utilizing technologies with a satisfactory track record and use of experienced contractors will be required. Market forces and no AOSIS/SIDS DOCK or government technology subsidies aim to ensure that rational choices are made for investments. |
| 11. Failure of investment projects | Endogenous | Low | Mitigated through use of commercial approaches placing risks in the hands of private sector through cost sharing mechanisms. Additional training in investment quality energy audits will contribute to reducing this risk. |

**Annex C Logical framework**

| Project Strategy | Objectively Verifiable Indicators | Sources of Verification | Assumptions |
| --- | --- | --- | --- |
| **Overall Goal (both GEF/SIDS Dock components)** |  |  |  |
| To reduce GHG emissions sustainably through a transformation of the building energy efficiency market for existing and new buildings and an energy saving framework for industry | **10-year target**CO2 equivalent emissions are reduced by an accumulated total of 300,000 tonnes until horizon 2020 **End-of-project target:**42,000 tonnes of CO2 avoided due to 30 verified investments in energy efficiency measures in buildings and industries**Mid-project target:**9,000 tonnes of CO2 avoided 5 verified investments in energy efficiency measures in either buildings or industry | Yearly Reports giving reductions in tonnes CO2 submitted to UNDP CO prepared by Project Management Unit (PMU)Impact Report submitted to UNDP CO by government 7 years after project completionAnnual Progress Reports from PMU submitted to UNDP CO Mid-term and terminal evaluations of usage undertaken via user survey to assess experience and technology performance | Effective enforcement of regulations and standards is sustainably maintained after the end of the project Project support is consistent throughout project by government and donors and afterwards by governmentElectricity prices remain stable or continue to rise and act as an incentive for investment in energy saving. |
| **SIDS/Dock COMPONENTS only** |  |  |  |
| **Component 1:** Drafting of additional Regulations and Codes for energy savings in Buildings and Industries, and operationalization of EEMO  | **End-term target:**Enforcement of all Regulations and Codes developed in the GEF and SIDS/DOCK projects The future of the Energy Efficiency Management Office ensured through government budget allocations**Mid-term target:**Core technical and administrative Staffs of EEMO recruited Additional Regulations and Codes developed | Copies of regulations and codesAnnual report from PMU and EEMO, including results of randomised survey of compliance to regulationsCopy of government budget and planning | Ongoing support from government and concerned stakeholdersRegulations and Codes developed are adopted by stakeholders and government |
| **Component 2:** Stimulating energy saving services and technology in the building and industrial sectors  | **End-term target:**At least 20 trained building energy auditors are certified and thus have met sufficiently high standards to be included on the approved list to be maintained by the EEMOAt least 20 energy audits have been carried out under the Energy Audit Management Scheme (EAMS), with 15 going forward to investmentAt least 10 local Architects have attended enhanced training courses/workshops in energy efficiencyStandard software developed for energy audits in Industries**Mid-term target:**At least 15 Energy Auditors are working to qualify as Certified Building Energy AuditorsAt least 5 energy audits have been carried out under the EAMS | Project reports submitted by PMU and EEMOTerminal Evaluation ReportProject reports submitted by PMU and EEMO | Ongoing growth or sustaining of energy (electricity) prices |
| **Component 3:**Capacity Building  | **End-term target:**Enhanced training courses/workshops attended by Energy Auditors, Compliance Officers, Enforcement Officers and other professionals of the building sectorTrained and /or Certified Building Energy Auditors and can use MBEAT for energy auditing and compliance checking Trained Energy Auditors and Energy Managers in IndustriesMSB can act as the local Certification BodyMAURITAS can act as THE local Accreditation BodyEEMO Staffs received comprehensive training in the administrative tools and procedures put in place**Mid-term target:**Consultants appointed to implement EAMS, to customize MBEAT for code compliance and for capacity building of all stakeholders | Project reports submitted by PMU and EEMOAnnual report of EEMO on its operationTerminal Evaluation ReportProject reports submitted by PMU and EEMO | All stakeholders are interested in the training courses and workshops that are organized |
| **Component 4:**Development of a framework for energy savings in Industries | **End-term target:** Guidelines available and in use for Energy Audits in IndustryCode of Practice for Energy Managers developed**Mid-term target:** Review completed for preliminary surveys and energy audits done by Enterprise Mauritius  | Project reports submitted by PMU and EEMOAnnual report of EEMO on its operationTerminal Evaluation ReportProject reports submitted by PMU and EEMO | Electricity prices remain stable or continue to rise and act as an incentive for investment in energy saving. |
| **Component 5:**Monitoring, learning, adaptive feedback and evaluation | **Target:**Measured indicators of project outputs and project impactsAt least 4 project technical reports and/or publications | End-of-project indicator studiesMid-term and final evaluation reportsProject technical reports and publications | Continuous support from the members of the National Steering Committee |

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Strategy** | **Objectively Verifiable Indicators** | **Sources of Verification** | **Assumptions** |
| **Component** |  |  |  |
| **1.1:** EAMS Regulations implemented | **End-term targets**: The ongoing existence of the EEMO is assured after the end of the projectEEMO has successfully involved stakeholders from all Government ministries and agencies and is positively evaluated by them**Mid-term targets**: EEMO is operating effectively (other outputs indicators are achieved) | Budgets allocated in government plansReports from EEMOResult of evaluation | Regulations and Codes developed are adopted by stakeholders and government |
| **1.2:**Regulations of designated consumers for mandatory audits implemented. | **End-term targets**: Regulations / codes in force and receiving support from all government stakeholders**Mid-term targets**: Regulations enacted  | Regulations / codesMinutes from meetingsGovernment gazette/Legislation | Regulations and Codes developed are adopted by stakeholders and government |
| **1.3:** EEMO sustainably structured, staffed and provided capacity to manage energy audits | **End-term targets**: EEMO operationalOngoing budgets allocated to sustaining compliance enforcement**Mid-term targets**: EEMO produce a documented set of clear operational procedures | Government budget reportsAnnual report of EEMO | Ongoing support from government and concerned stakeholders |
| **1.4:** Administrative tools and procedures for EEMO developed | **End-term targets**: Administrative tools and procedures of EEMO developed and in use**Mid-term targets**: Consultant appointed | Project Progress ReportsAnnual Report of EEMOMinutes from meetingsProject Progress Reports | Administrative tools and procedures developed meet the needs of EEMO |
| **1.5:**All regulations and codes enforced | **End-term targets**: Regulations and codes have been enforced and are in use**Mid-term targets**: Regulations drafted | Report on adequacy of regulationsProject Progress Reports | Regulations and Codes developed are adopted by stakeholders and government |
| **2.1:**Energy Audit Databank and National Registry created at the EEMO. | **End-term targets**: National registry fully functional Software and hardware procured **Mid-term targets**: Software and hardware procured and installed | Online connection with stakeholderReport published by EEMO |  |
| **2.2:**MBEAT customized as per requirements of the Energy Efficiency Building code and Energy Efficiency Building Regulations | **End-term targets**: Use of MBEAT for compliance by professionals**Mid-term targets**: MBEAT customized for compliance and distributed to relevant professionals | Records from EEMO including its annual plan. MBEAT can be accessed online at EEMO by authorized usersProject Progress Report |  |
| **2.3:**Supplementary Documentation to the Energy Audit Management Scheme (EAMS) to include compliance checking using the customized MBEAT in accordance with the requirements of the new energy efficiency building regulations and code | **End-term targets**: EEMO has to document all materials**Mid-term targets**: MBEAT software available to all auditors and compliance officers | Reports from PMUTerminal evaluation reportDesigns, minutes of meetings and draft plansReporting from municipal building permitting authorities |  |
| **2.4:**Development of a software for energy audits in industry | **End-term targets**: Software validated in typical industry and distributed to users with manual**Mid-term targets**: Consultant develop and customize software | Certificate of Accreditation from MAURITASCopy of documents submitted to EEMO |  |
| **2.5** Implementation in at least 5 non-residential buildings and 10 industrial entities under the Contingent Support Mechanism for energy audits and feasibility studies started under the GEF Programme   | **End-term targets**: 15 audits/feasibility undertaken**Mid-term targets**: Contingent Support Mechanism and criteria for funding audits in place | 15 audits/feasibility reportsCopy of reports submitted to EEMO by beneficiaries |  |
| **3.1:**Further training of Building Energy Auditors, Compliance Officers, Enforcement Officers, and other professionals of the building sector in Mauritius and in Rodrigues | **End-term targets**: At least 60 local experts, including 45 trained initially in auditing only, completed certification course in both auditing and compliance**Mid-term targets**: course and certification programme has been fully developed. Audit and compliance training material developed, and positively evaluated by international expert peer review  | Training course reportsTraining reportsReportAudit materialApplications for courseTraining reports |  |
| **3.2:**Interim Certification in auditing and compliance of the 45 Trained Energy Auditors by an external accredited Certification Body  | **End-term targets** :At least 20 energy auditors certified in auditing and compliance**Mid-term targets**: short re-training in use of MBEAT for auditing before certification | List of approved auditors/gazetteEEMO Computerized register |
| **3.3:**MSB can run certification scheme of energy auditors | **End-term targets**: MSB obtains accreditation from MAURITAS**Mid-term targets**: MSB has put in place all documentary requirements for certification | Certificate of Accreditation from MAURITASCopy of documents submitted to EEMO |
| **3.4:**MAURITAS can accredit MSB | **End-term targets**: MAURITAS has necessary ISO 17024 for the certification scheme**Mid-term targets**: All accreditation documents and procedures in place at MAURITAS | ISO CertificateCopy of documents submitted to EEMO |  |
| **3.5:** Training material and training capacity available for future energy auditors and compliance officers | **End-term targets**: EEMO has to document all materials**Mid-term targets**: MBEAT software for compliance available to all auditors and compliance officers | Reports from EEMOTerminal evaluation reportReports from EEMO |  |
| **3.6:** Training completed on customized MBEAT for Code compliance | **End-term targets**: Customized MBEAT for Code Compliance available and in use**Mid-term targets**: Consultant appointed to customize MBEAT for Code Compliance | Reports from EEMOTerminal evaluation reportReports from EEMO |  |
| **3.7:** EEMO has all tools and procedures in place to deliver its obligations.Core technical and administrative staffs of EEMO trained and EEMO operational | **End-term targets**:EEMO fulfils its mandate**Mid-term targets**: Local Consultants appointed for the development of administrative tools and procedures for EEMO | Records from EEMO including its annual planAnnual report of EEMO Reports from EEMO  |  |
| **3.8:** Training of energy auditors and energy managers for industry | **End-term targets**: Energy Auditors and energy managers trained and provided training materials and code of good practice**Mid-term targets**: Training course and materials designed | Project Progress Reports |  |
| **4.1**: Preliminary audits performed by Enterprise Mauritius reviewed | **End-term targets**: Review exercise will allow for energy auditing in at least 10 energy intensive industries**Mid-term targets**: Review exercise documented by EEMO in computerised registry of EEMO | Review ReportEEMO Registry |  |
| **4.2:** Guidelines for energy audits in selected energy intensive industries | **End-term targets**: Guidelines harmonised with code of good practice for energy auditors and energy managers and published**Mid-term targets**: Draft guidelines discussed in workshop with stakeholders | Reports of guidelines |  |
| **4.3:** Code of Practice for Energy Managers in Industries | **End-term targets**: Code of Practice finalised and published **Mid-term targets**: Draft code of practice discussed in workshop with stakeholders | Copy of Code of Practice |  |
| **5.1:** Elaboration and implementation of a monitoring and evaluation plan as per UNDP requirements | **End-term targets**: Project completion report**Mid-term targets**: quarterly reports, annual project review (APR), project implementation report (PIR) | All Reports, except quarterly, submitted to UNDP and AOSIS SecretariatQuarterly reports submitted to UNDP CO |  |
| **5.2:** Lessons learned and disseminated | **End-term targets**: Consolidated report of all publications**Mid-term targets**: At least two publications | Consolidated report available on line at EEMOTechnical publications available online at EEMO |  |

**Annex D Terms of Reference of project staff (Project management unit) and National Steering Committee**

The **National Project Director** will be a high-level member of the Governmental executing agency and will be responsible at the highest level for ensuring that the project implementation follows national policy and standards. This is a part time position continuing for the duration of the project. He or she will dedicate approximately 20% of their time to the project and will report directly to the National Steering Committee. Key tasks will be:

* To have overall responsibility for the implementation of the Project
* To supervise the Project Manager through meetings at regular intervals to receive project progress reports and provide guidance on policy issues
* For certifying the Work plan, Financial Reports and Request for advance of funds under the project, ensuring their accuracy and in accordance with the project document; the NPD shall be the authorized signatory for contracting services under the project following endorsement by the Government and UNDP
* To chair the Steering Committee and represent the project at the tripartite meetings
* To take the lead in developing linkages with the relevant baseline programmes regarding energy efficiency in Mauritius maximizing complementarities.
* He or she will also represent the project at high-level national and international meetings and will keep the Minister of Public Utilities updated on project advances and challenges as needed.

The **Project Manager** will be responsible for the overall management and coordination of the project activities. He/she shall report to the National Director.This is a full-time position for the duration of the project. He/she will manage and provide supervision of project implementation liaising directly with the Project Director, Members of the National Steering Committee, the Implementing Agency, and co-funders. He/she will undertake yearly operational planning and provide guidance on its day-to-day implementation. In doing this, he/she shall be responsible for the effective and efficient implementation of the project activities to achieve stated objectives and for all substantive and managerial reports from the Project. Further key responsibilities include:

* Preparing a detailed annual work plan for the project;
* Work closely with project partners to closely coordinate all the actors involved with achieving Project Outcomes, Outputs and Activities;
* Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects;
* Finalize the ToRs for the consultants and subcontractors;
* Coordinate the recruitment and selection of project personnel;
* Supervise and coordinate the work of all project staff, consultants and sub-contractors;
* Supervise the work of all PMU staff, including national staff;
* Prepare and revise project work and financial plans, as required Government and UNDP;
* Manage procurement of goods and services, including preparation of bidding documents, under UNDP’s and required government’s guidelines and oversight of contracts;
* Ensure proper management of funds consistent with UNDP requirements, and budget planning and control;
* Establish project reporting and monitoring of the validity of project assumptions and in dialogue with the National Steering Committee and the UNDP adapt the activities so as to ensure project success;
* Arrange for audit of all project accounts for each fiscal year;
* Prepare and ensure timely submission of quarterly financial consolidated reports, quarterly consolidated progress reports, annual project implementation review reports, annual work plans and other reports as may be required by UNDP.
* Disseminate project reports to and respond to queries from concerned stakeholders;
* Report progress of the project to the Steering Committee, technical meetings, and other appropriate forums;
* Oversee the exchange and sharing of experiences and lessons learned with relevant conservation and development projects nationally and internationally.
* Organization and supervision of workshops and training needed during the project
* Liaison with relevant ministries, national and international research institutes, NGOs and other relevant institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the project
* Undertake procedure towards the setting-up and legalization of the EEMO;
* Setting up small working groups for specific works;
* Undertaking any other activities that may be assigned by the Steering Committee.

The **National Steering Committee** will support to the project manager for successful implementation of the project and will, *inter alia*,

* Monitor the progress of the work, validate outputs and ensure that the project develops in accordance with national development objectives, goals and policies.
* Provide guidance, advice, and support to the consultants and approve their work plans
* Pay special attention to the assumptions and risks identified in the project, and seek measures to minimize these threats to project success and remove bottlenecks and advise on timely steps to be taken to progress in the project and attempt to resolve conflicts, if any.
* Recommend any actions to be taken at the level of Cabinet of Ministers, as appropriate
* Ensure collaboration between institutions and free access on the part of project actors to key documents