



# **Rural Electrification Fund (REF)**

## **OPERATION MANUAL FOR RURAL ELECTRIFICATION FUND (REF)**

Adopted by Board of the Rural Electrification Fund in Meeting  
No. 5 dated 11 January 2007

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## Definitions

Unless the context otherwise requires, the following terms shall have the following meanings:

|                                 |  |
|---------------------------------|--|
| Board Approval Limit            | Grants above the approval limit of US\$200,000 for an investment project require the approval of the REFB  |
| Developer                       | Entity (utility, private entrepreneur or Community Based Organization) that invests in infrastructure projects and companies   |
| Electrification coverage        | Percentage of national households living in an electrified area.   |
| Environmental Assessment        | The process of managing the environmental aspects (EA) of a policy, strategy, program, or subprojects from the earliest stages of identifying potential actions to their completion and evaluation. The process encompasses identification of potential adverse environmental impacts; assessment of these impacts and comparison to impacts of alternative approaches; design and implementation measures and plans to avoid, minimize, mitigate, or compensate for adverse impacts; and development of associated management and monitoring measures.  |
| Environmental Impact Assessment | Environmental assessment instrument for (EIA) “Category A” projects to identify and assess major potential environmental impacts of proposed projects, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures (generally in the form of an environmental impact plan).  |
| Environmental Review            | Environmental assessment instrument for (ER) “Category B” projects, in which the project is likely to have minimal impacts but should be reviewed with a simple and standardized checklist of possible impacts and appropriate mitigation measures.  |
| Environmental Screening         | The process of identifying as early as possible, the potential adverse environmental impacts of a proposed project, assigning an environmental category (Category “A”: projects that potentially cause significant and possibly irremediable environmental impacts, “B”: projects that cause lesser impacts, which often are essentially remediable or mitigable; “C”: projects that can be expected to have little or no environmental impact); indicating the level of anticipated impact and corresponding level of EA required and identifying the most relevant EA instrument (ER, LEA or EIA) needed to address impacts and environmental issues associated with the project.; |
| Environmental and Social        | The frame document in Annex D of this Manual   |

|                                |   |
|--------------------------------|---|
| Assessment Framework           | (and any amendments thereto) that shall: (i) enable to assess the environmental and social impacts of Projects; and (ii) where applicable, govern the preparation and environmental management plans, resettlement and rehabilitation plans and other appropriate mechanisms required to mitigate and monitor any adverse impacts from carrying out the Project |
| Executing Agency               | Agency nominated in a Government-to-Government Agreement for a new donor-financed program as the nationally responsible counterpart institution for overall policy issues.  |
| Financial Closing              | The point in time when full agreement has been reached between equity investors and lenders; all conditions of lenders and investors have been met to finance the total financial package for the project, the loan agreements and shareholder agreements have been signed and financing disbursements can take place.  |
| Free limit                     | Grant for an investment project below US\$200,000. Subject to other eligibility criteria being fulfilled, grants below the free limit do not require the approval of IDA  |
| Household electrification rate | Percentage of national households that are provided with an electricity service   |
| Investment Subsidy             | Performance based subsidy payments made in instalments during construction and until commissioning, with at least half of the payment amount disbursed after a target number of connections are completed to the satisfaction of the REFS.  |
| Least cost technology          | Technology with the lowest annuitized life-cycle economic cost among alternative options; taking into account environmental costs and differences in risks.   |
| Project                        | Project proposal submitted to the REF for investment subsidy support, which was identified, prepared and developed by a private project developer, NGO or community.  |
| Project Management Unit (PMU)  | The unit appointed by MIME to administer the REF-grant program until the REFS has been established and become operational.  |
| Stakeholder                    | “Interested party”: institution or legal person having a direct interest in the activity.   |

## Abbreviations

|        |  |
|--------|--|
| ACLEDA | Association of Cambodian Local Economic Development Agencies |
| BDS    | Business Development Services                                |
| CBO    | Community based organization                                 |
| EAC    | Electricity Authority of Cambodia                            |
| FMC    | Financial Management Committee                               |
| FMR    | Financial Monitoring Report                                  |
| FU     | Finance Unit   |
| GEF    | Global Environmental Facility                                |
| IDA    | International Development Association                        |
| ICB    | International Competitive Bidding                            |
| MFI    | Micro Finance Institutions                                   |
| MEF    | Ministry of Economy and Finance                              |
| MIME   | Ministry of Industry, Mines and Energy                       |
| NGO    | Non-governmental Organization                                |
| PAP    | Project Affected Person                                      |
| PCF    | Prototype Carbon Fund  |
| PCI    | Participating Credit Institutions                            |
| PECC   | Provincial Electricity Council of Cambodia                   |
| PFI    | Participating Financial Institutions                         |
| PIU    | Public Information Unit                                      |
| RGC    | Royal Government of Cambodia                                 |
| REFB   | Rural Electrification Fund Board                             |
| REE    | Rural Electrification Enterprise                             |
| REF    | Rural Electrification Fund                                   |
| REFS   | Rural Electrification Fund Secretariat                       |
| REPMEU | Rural Electrification Planning, Monitoring & Evaluation Unit |
| RET    | Renewable Energy Technology                                  |
| SHS    | Solar Home System  |
| SOE    | Statement of Expenditures                                    |
| TA     | Technical Assistance   |
| VDC    | Village Development Committee                                |

## **Chapter 1 Introduction**

### **1.1 Status of the Manual in its present Form (December 2006)**

The REFB, as Board of the REF, adopts the procedures for the REF. The decision taking is solely subject to constraints imposed by covenants in REF loan- and or grant-financing agreements between the REF/RGC (Royal Government of Cambodia) and co-funding donors. Covenants will in particular cover procurement, disbursement and financial reporting issues.

The purpose of this manual is to provide written procedures and guidelines for operating all aspects of the Rural Electrification Fund (REF) during its pilot phase. Some details are defined by standard World Bank operational procedures for loan agreements. During operation, further adjustments can be expected in response to lessons learned from practical experience. This manual is a steadily evolving instrument.

### **1.2 Update and Revision**

This operation manual shall be updated and revised when significant amendments are made to the Development Credit Agreement (DCA) or Global Environment Facility Trust Fund Grant Agreement (GEF) and or as required.

## Chapter 2 Background

### 2.1 Government Rural Electrification Policies and Strategies

RGC electrification policy is to reduce the costs of electricity, which are among the highest in the world, and to increase the national connection rate: in 1998, 12% of Cambodia's 13 million people were connected to power supply, 50% of urban and 6% of rural households. The Government's electrification target is, by the year 2030, to provide 70% of rural households with access to grid quality electricity at affordable prices. The strategy relies on EdC to undertake the expansion of the national grid into rural areas, while private entrepreneurs invest in rural distribution and electricity supply projects. Stand alone systems, above all, solar home systems, are to provide service to rural households who will not be connected in the foreseeable future.

### 2.2 Decree

The RGC, through a Royal Decree, has set up a Rural Electrification Fund (REF), as an autonomous public institution to channel sub-grants and technical assistance to the private sector and rural communities to implement rural electrification sub-projects. The decree defines the objectives, governance and financing sources of the REF. The REF is to be financed by donor funds and other sources of government contributions. The REF is managed by a Board, REFB. The members of the Board are appointed by the Prime Minister. The day-to-day works of REF are performed by the REFS, the Rural Electrification Fund Secretariat.

### 2.3 Mission of the REF

The Government has established the REF as a public institution with administrative, managerial, technical and financial autonomy under the laws of the Kingdom of Cambodia. The objectives for which the REF is established are to promote equitable rural electrification coverage by facilitating the population's access to electricity at affordable price for economic, social and household uses. In its support of investment projects, the REF will in particular promote the exploitation of the economic potential for the application of well proven, technically and commercially, of new and renewable energy technologies in rural areas. According to the Royal Decree establishing the REF, its mandate will last until it achieves the goals set on government's policy on rural electrification.

The sources of funding for the REF may include various donors as well government sources. The REF will use its resources to co-finance on a grant basis the implementation of projects consistent with its objectives such as:

- (a) providing general support activities for the preparation and implementation of rural electrification projects in Cambodia such as promotion campaigns, gathering of information on rural investment opportunities and costs, and promotion of productive uses of electricity;
- (b) providing private sector and local community output-based investments in rural electrification projects; and,
- (c) promoting the commercialization of well proven, technically and commercially, of new and renewable energy technologies.



## 2.4 IDA credit, GEF grant, and Donor's support

IDA loans and GEF grants totaling US\$ 12.83 million support the REF-activities directly and indirectly.

1. A start-up capital of US\$ 6.64 million is provided to the REF in the form of an IDA credit of US\$ 5.10 million and a GEF grant of US\$ 1.54 million.
2. A TA package of US\$7.63 million (IDA: US\$3.78 million; GEF: US\$3.85 million) is given to MIME/REF to finance:
  - US\$4.15 million for TA to Renewable Energy Business Development.
  - US\$1.45 million (US\$0.30 million from GEF) are for TA to build technical and business planning capacity within REEs.
  - US\$0.61 million (of which US\$0.30 million from GEF) for capacity building of financial institutions.
  - US\$0.62 million for MIME policy making for renewable energy investments.
  - US\$0.30 million for TA to develop end-use activities and rural income generation.
3. Currently, REF has not received funding from other donors. REF is expected its funding source to include more donors in the future.

## 2.5 Quantitative Targets for REF-Activities financed by IDA and GEF

The quantitative targets for the 6 year IDA/GEF financed project activities are: (a) extension of the rural electricity grids to about 50,000 new households by REEs; (b) electricity service through solar home systems to about 12,000 households; (c) construction of mini hydroelectric power stations of about 6 MW of renewable energy capacity; and (d) construction of micro hydroelectric power plants of about 850 kilowatts (kW) capacity.

## 2.6 Project Management Unit, PMU

PMU composed of MIME and EdC staff is created at MIME to perform the functions of the REF and facilitate its timely creation. The procedures for PMU are the same as for the future REFS, which will replace it, once its core staff has been hired. REF shall begin its initial operation when key personnel are hired. During the initial operation, REFS is gradually empowered to manage its day to day operation. Upon meeting all six conditions required by the DCA, REF shall be fully empowered and become fully operational.

## Chapter 3

### Program Mechanisms and Project Cycles

#### 3.1 Governance and organizational structure

The Ministry of Industry, Mines and Energy (MIME) will have policy oversight of the REF. In particular, MIME will submit to the Prime Minister for appointment nominated candidates for members of the REF Board and monitor the compliance of REF funding policies and strategies with the national objectives for rural electrification.

The Ministry of Economy and Finance (MEF) will be responsible for the mobilization of national and international sources of funding for the REF.

The Annual Meeting of Stakeholders will act as the key consultative organ for the Ministries and for the Board of the REF. Before the end of each fiscal year, the Minister of Industry, Mines and Energy will convene a meeting of REF Stakeholders to be attended by the following:

- A representative for each donor providing funds to the REF;
- Senior representatives from the concerned ministries (involved in rural electrification);
- Representatives from financial institutions, rural electrification enterprises, suppliers of rural electrification goods and services, and NGOs involved in rural electrification and renewable energy projects; and,
- Members of the REF Board and the Executive Director of the REF Secretariat.

The purposes of the meeting will be to provide for the presentation by REF Board and discussions with stakeholders of:

- The draft Annual REF Report containing a status of the activities undertaken by REF.
- A preliminary report on the end-of-year financial situation of the REF.
- A draft Board resolution for the optimal allocation and use of REF funds for the next fiscal year, including: (a) allocation of the annual REF funds to investment subsidies, to general rural electrification and renewable energy support programs, and to the REF operational expenses such as payments to the Board, and the Secretariat; (b) eligibility criteria for grant support to rural electrification and renewable energy projects; and (c) REF subsidy rates for the next financial year.

The Board of the REF (REFB) shall consist of the following member:

1. The Minister of Industry, Mines and Energy or his/her representative, as Chairman of the Board;
2. The Secretary of State of the Ministry of Economy and Finance or his/her representative, as a Board vice-Chairman;
3. The Secretary of State or his/her representative, from the Ministry of Rural Development, as a Board vice-Chairman;
4. A representative of the Council of Ministers, as a Member;
5. A representative of the Ministry of Interior, as a Member;
6. The Chairman of EAC or his/her representative, as a Member;
7. A representative of donors, recommended to the Minister of Industry, Mines and Energy by the donors, as a Member;

8. A representative of the financial sector recommended to the Minister of Economy and Finance by the Cambodia Bankers Association, as a Member;
9. A Representative of firms involved in rural electrification development projects, recommended to the Minister of Industry, Mines and Energy, as a Member;
10. A representative of non-governmental organizations or international organizations involved in rural electrification development projects, recommended to the Minister of Industry, Mines and Energy, as a Member;
11. A representative of the rural consumers, as a Member. A Commune Mayor or a Commune Council Member can be chosen to occupy this place if there is not yet a representative from the rural consumers.

Members of the Board hold office for a duration of two years which upon expiration may be renewed only once for another two (2) years term. All members of the REF Board will have the right to vote on all matters requiring the decisions of the REF. These decisions of the REF Board will be based on the majority vote. All members of the REF Board will be given notice of the date and time, place and objective of the session in which the decision will be voted on. The REF will keep a record of the Board proceedings, findings and decisions. The REF Board decisions, with their explanations, will be published as soon as the decisions are made in particular on the REF website, unless the REF Board has reasonable causes to withhold or delay the publication.

The functions of the Board will be as follows:

- To act as the advisory board on policy issues related to rural electrification and the promotion and encouraging of well proven, technically and commercially, of new and renewable energy technologies, to the Ministry of Industry, Mines and Energy;
- To oversee the REF and to monitor the performance of the REF Secretariat and of the REF Payments Agent;
- To adopt its own procedures for conducting meetings and other administrative matters related to the execution of its functions;
- Approve the appointment of a duly qualified independent and internationally recognized firm to carry out the external audits of the REF and the Payments Agent.

In the execution of its REF oversight functions, the Board shall:

1. At the end of each financial year, adopt the annual policies and procedures for the use of REF funds for the next financial year, in particular concerning:
  - a. The allocation of the annual REF budget to funds for:
    - Investment grants,
    - Rural electrification support programs and projects,
    - REF operational expenses including the cost of payments agent, and
    - New and renewable energy programs and projects.
  - b. The appropriate criteria for REF grant support;
  - c. The REF grant rates for the financial year.
2. Hire or dismiss the Executive Director of the REF Secretariat
3. Define procedures for tendering of outsourced programs and consulting tasks and payments to project sponsors.
4. Approve:

- a. The organizational structure, personnel policies and internal work procedures of the REF;
  - b. The annual work program of the REF;
  - c. The annual operational budget of the REF;
  - d. The annual accounts of the REF.
5. Monitor the management and operational performance of the REFS including the payment procedures for sub-contracts.
  6. Contract the REF Payment Agent and supervise his/her performance and the flow of funds to grant recipients.
  7. If needed, hire a person with in-depth knowledge of new and renewable energy technologies and Clean Development Mechanisms, to act as advisor to the REF Board.

The REF Secretariat will be managed by an Executive Director, who will be appointed by the Board on the basis of public competitive selection. The Executive Director will be responsible for the daily management of the REF. The specific functions of the Executive Director will be defined in the employment contract signed with the Board. The Board will also ensure that the remuneration of REF Secretariat staff is competitive with prevailing salaries offered by the private sector and shall not be bound by the terms established under the State regulations for civil service salaries and terms of employment.

The REF Secretariat will have the following functions:

- a. To generate and provide information to communities, investors, consultants, and financial institutions on:
  - Costs and benefits of rural electrification and new and renewable energy projects,
  - Potential investment opportunities, and
  - On the terms and procedures of technical and financial support programs.
- b. To evaluate and approve applications for the REF grant funds to rural electrification and new and renewable energy projects and disclose, inter alia, the names of the approved projects, a brief description of the approved projects, the names of the grant beneficiaries, and the amount of each grant approved.
- c. To undertake planning and project preparation activities needed to keep up the momentum of the Government's rural electrification program support.
- d. To monitor and evaluate the performance of supported programs and projects and maintain a national rural electrification database on rural electrification projects in Cambodia.
- e. To carry out any other functions as the Board shall direct it to carry out.

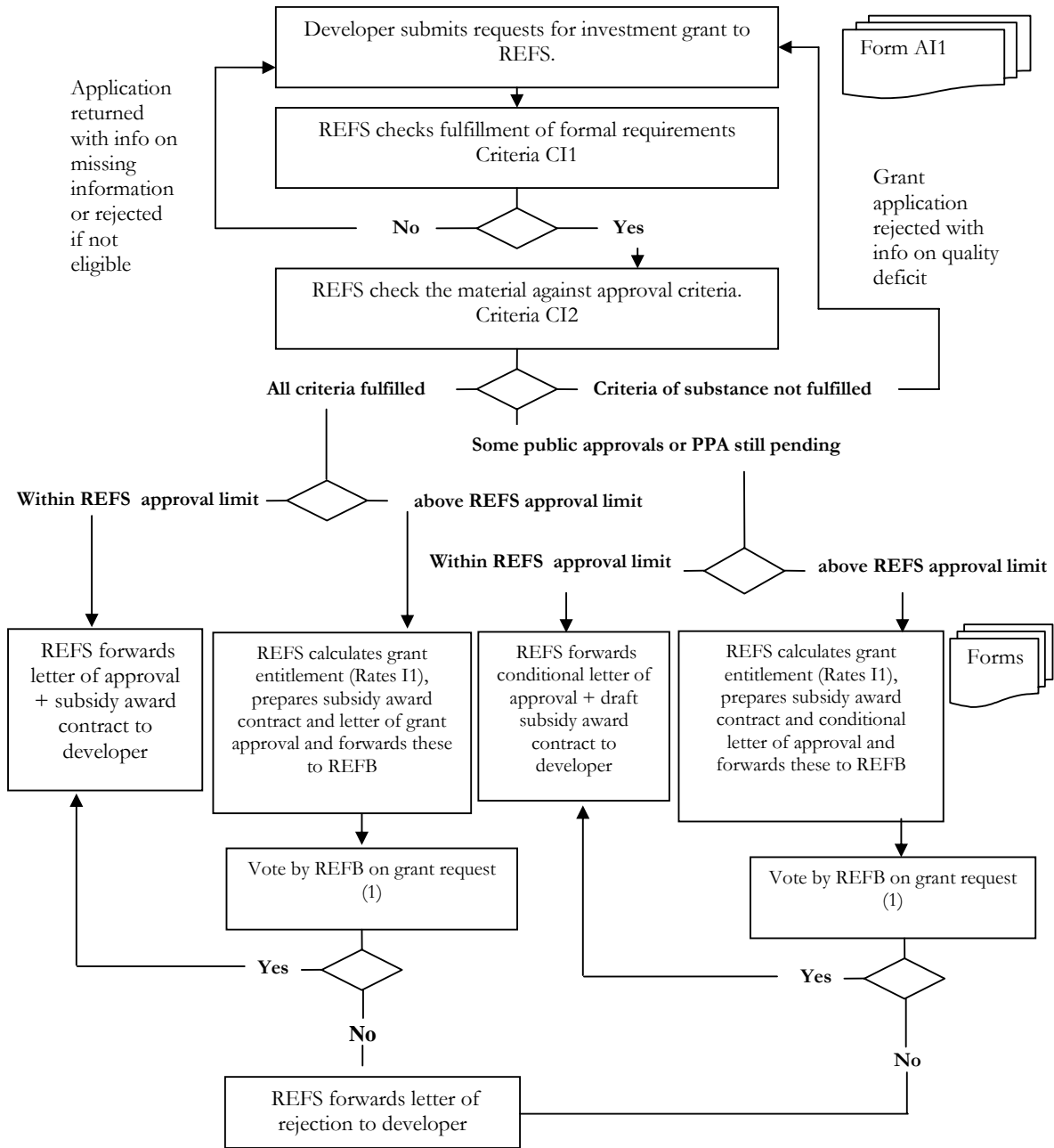
The administration of payments to beneficiaries of REF grants will be undertaken by the National Bank of Cambodia. To avoid conflicts of interest, all employees of the REF, including their spouses and children will not be permitted to hold any official, advisory or consulting role with, own stocks or bonds of, or have any economic interest in the beneficiaries of the REF grants. Furthermore, all employees of the REF will be prohibited to accept, any gift or gratuity, different from that generally applicable to the public, from any above-mentioned beneficiaries of the REF grants.

The REFS shall establish and maintain a financial management system, including records and accounts, and prepare financial statements in accordance with international accounting standards to adequately reflect the operations, resources and expenditures related to the REF. The REFS

shall, within six (6) months after the end of each financial year, submit the REF's audited financial report to the REF Board, to the Minister of Industry, Mines and Energy, the Minister of Economy and Finance, and to each donor of the REF. At time, IDA/GEF or a donor may require and or appoint an auditor of its choice and at its cost to audit the books of the REF and may have a provision to this effect in its agreement with the REF. The REF will ensure that the funds from the REF are used for intended purposes and procurement of goods, works and services under the rural electrification projects to be financed by the REF funds are performed, pursuant to the laws and regulations on procurement of the Kingdom of Cambodia, in accordance with economy and efficiency principles, and in a competitive and transparent manner.

### **3.2 Project Cycle**

### 3.2.1 Approval of subsidy award contract: flow chart



(1) If grant amount to a single project is larger than US\$ 200,000 IDA no objection is required

## Criteria for Approval of Investment Grants

### Criteria CI1: Criteria for Formal Check on Application for Investment Grant

1. Is the application form fully and correctly filled out or is any information missing
2. Is copy of the feasibility report attached
3. Is copy of the application to EAC for the generation/distribution/consolidated license attached; and/or copy of the license itself
4. Is copy of the letter of intent for project loan attached by the bank connection of developer
5. Are copies for all relevant approval documents attached; or if, not yet processed, of the applications for approval
6. Is the project eligible for REF-grant support, applicable to either existing REE or new REE, falling into one of the following categories:
  - Electricity supply project with diesel generator (applicable to new connection only)
  - REE grid extension
  - Electricity supply project connected to grid or neighboring countries.
  - Electricity supply project served by micro or mini - hydro (possibly with diesel generator as back-up)
  - Electricity supply project served by biomass/biogas -fueled generator (possibly with diesel generator as back-up)
  - Micro- or mini-hydropower plant connected to the grid
  - Biomass/biogas fueled generator connected to the national grid
  - Solar Home System based project may include institutional systems like pagodas, schools etc.

### Criteria CI2: Criteria for Approval of Investment Grant

As the license approval process by EAC covers issues 1-4, the review is performed in close consultation with the EAC-officer in charge of processing the license application. For maximum productivity, EAC and REFS formally decide on a division of labor and/or form for the mutual consultation process; including the evaluation criteria to be used.

#### *(a) Criteria that apply to all categories of REF-supported projects*

1. Compliance with regulatory conditions:
  - All needed local planning approvals have been obtained
  - An EIA, if required, has been performed and approved by the pertinent authorities
  - EAC has issued a license for the project, or, received a license application
  - EAC has issued no objection for the Project Investment
  - No other party applied to EAC for a license for the same project in response to the publication by EAC of the license application, within the time limit established by the Electricity Law and EAC regulations
2. Compliance with technical conditions:
  - The technical norms and standards for rural electrification and for renewable energy are fulfilled; the least cost design is used
  - The cost of individual major investment items is in line with the level indicated in the local costs (according to the available information in the local market).

3. Financial viability of the project

- there is strong evidence of financial closure;
- the commercial bank for providing the debt finance for the project has agreed to finance the project and finalized its due diligence assessment (copies of the draft loan agreement and the bank's project appraisal document are attached);
- evidence of other legal sources of finance or money including but are not limited to his/her own money, loan from family member, inheritance, proceeds from the sale of property.
- the evaluation confirms the bank's assessment of financial viability and ability of the project's cash flow in early years to service the debt payments.

4. Institutional viability of the project

- is the project applicant a legal entity or actively engaged in becoming registered as a legal entity (sponsors initiating RE projects need to establish a legally recognizable entity such as a co-operative or a company to qualify for grant awards). Project applicant can be either individual or company as defined under the EAC's licensing eligibility requirements.
- projects are not to be managed or majority-owned by the public sector and must have reasonable community support

5. Compliance with World Bank standards for social and environmental safeguards

*(b) Criteria specific for distribution projects*

- in the tariff application submitted to EAC for approval, the amount of subsidy received/to be received should be stated.
- potential consumers have expressed their interest in the project and agreed to take connection.

*(c) Criteria specific for grid-connected hydropower or biomass/ biogas-fueled power plants*

- EdC has signed a PPA with the developer or a letter of intent.



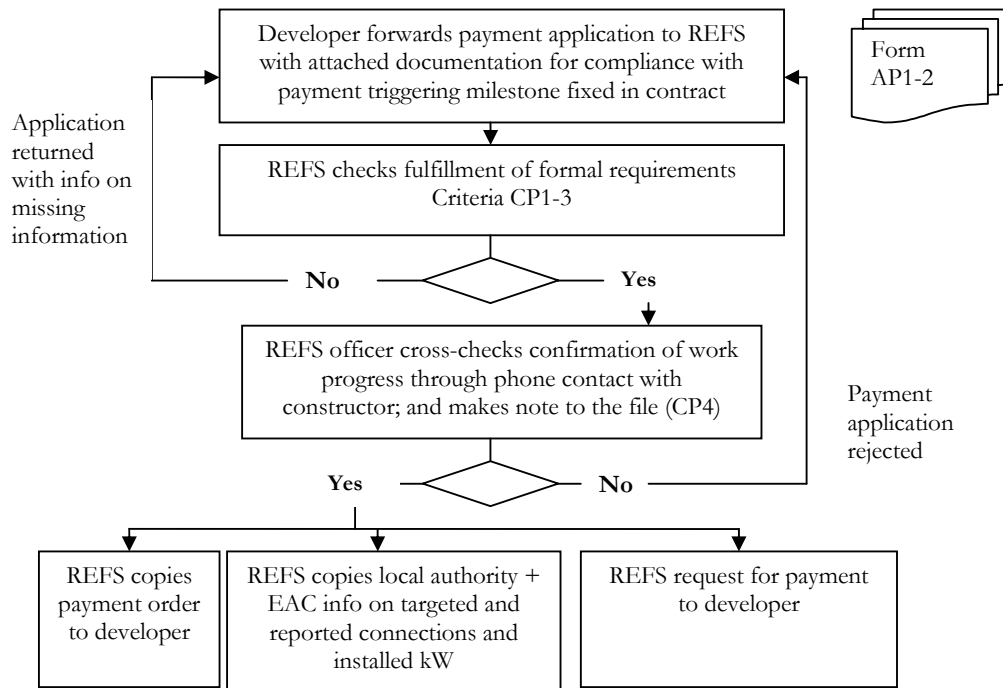
**Subsidy Rates for Investment Grants**

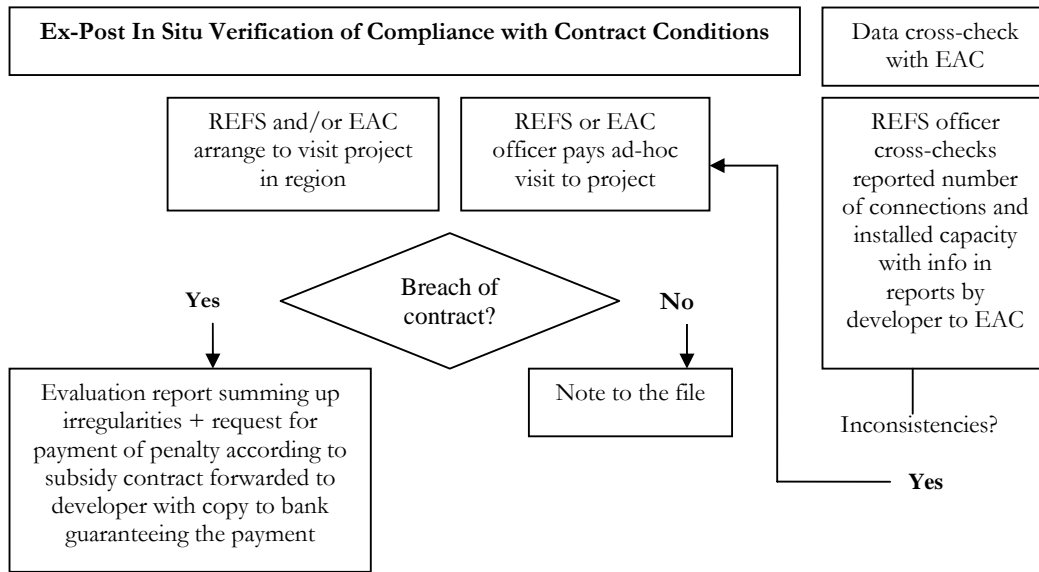
*Rates Schedule for Investment Grants, RI<sup>1)</sup>*

|   | Subsidy per new connection | Subsidy per kW |
|---|----------------------------|----------------|
| Electricity supply project with diesel generator REE grid extension                                       | US\$45                     | n.a.           |
| Electricity supply project connected to grid or neighbouring countries.                                   | US\$45                     | n.a.           |
| Electricity supply project served by micro- or mini hydro (possibly with diesel generator as back-up)     | n.a                        | US\$400        |
| Electricity supply project served by biomass-fueled generator (possibly with diesel generator as back-up) | n.a                        | US\$400        |
| Micro-hydro plant connected to national grid  | n.a.                       | US\$400        |
| Mini-hydro plant connected to national grid   | n.a.                       | US\$400        |
| Biomass/biogas fueled generator connected to national grid  | n.a.                       | US\$400        |
| Solar Home System   | US\$100 per set            |                |

1) Rates for 1st year of operation. To be adjusted in the following years in response to the balance between the supply of funds and the demand for funds

**3.2.2 Disbursements under subsidy award contract**





### Check List with Criteria for Disbursement of Investment Grant (payments 1-4)

#### 1st payment

- Request form completed by project developer
- In case of conditional subsidy award contract, documentation that missing authorizations have been obtained and/or that missing PPA with EdC is signed
- Evidence (bills etc.) that project developer has incurred actual expenditures amounting to at least 25% of the total investment sum estimated in the subsidy award contract.
- Declaration of project developer informing (i) construction progress and (ii) providing the planned time schedule for the completion of construction.
- Bank guarantee by co-financing bank or other acceptable guarantees or insurance policy for full repayment of REF-grants to REF in case of non-compliance by developer with the investment program listed in the subsidy award contract, including respect of technical specifications, and/or having received payment based on an inflated number of connected customers. If a developer eligible for the subsidy grant for new customer connections is not able to furnish a Bank guarantee or any guarantee instruments mentioned above, the subsidy grant may be processed by REFS for payment on satisfactory verification on the new connections. In such cases, the developer shall make up to three requests for payment of subsidy amount provided that the amount of each request, except the last request, is not less than US\$5,000.
- Bank account of developer for deposit corresponds to the bank account listed in the subsidy award contract; otherwise reason is given for new bank account.

#### 2<sup>nd</sup> payment

- Request form completed by project developer
- Written confirmation of post-installation verification by REFS, including compliance with technical standards and regulations
- In case of grid project, list of newly connected customers (those customers who are added as the result of the sub-project) with names and addresses, signed by developer
- Bank account of developer for deposit corresponds to the bank account listed in the subsidy award contract; otherwise reason is given for new bank account

- Customer Acceptance Receipts (CAR) in case of SHS projects

### 3rd payment

- Request form completed by project developer
- Evidence of targeted coverage and satisfactory operation for at least a period of 3 months in all cases.
- In case of grid project, list of any additional connected customers since 2<sup>nd</sup> payment with names and addresses, signed by developer
- Bank account of developer for deposit corresponds to the bank account listed in the subsidy award contract; otherwise reason is given for new bank account

### **Control checks on information received from project developer:**

#### *(a) Before requesting for a payment made to developer (CP4)*

REFS-officer administering the contract cross-checks the confirmation of completion of construction by direct phone call to the leading constructor who co-signed the declaration. The REFS officer makes a written note with date and time of phone confirmation, which is filed electronically and in paper to the project file.

#### *(b) After transfer of payment to developer*

- When requesting to make the second and third payments, the REFS-officer sends a note to the local planning office of the village/ regional authority, copied to EAC, informing it of reported targeted and connected customers and installed capacity of generators.
- REFS-officer administering the contract cross-checks the information on number of connected customers with “end-of-year” information supplied by developer to EAC in accordance with the regulatory requirements for his license. The REFS officer makes a written note, which is filed electronically and in paper to the project file.
- When within a three years period sufficient projects have been implemented in a region, a consultant can be contracted jointly by REFS to check the technical installations of completed projects in the region and to verify the number of connected customers.
- REFS and EAC staff pay visits to project sites, randomly selected, to get first-hand exposure to the rural electrification situation; and to use the opportunity to cross-check the performance of completed projects, including those already having been checked by a consultant. Relevant information from site-visits is shared between the above two institutions.

### **Procedure in case evaluation from site visits reports irregularities**

#### Site-visit evaluation report shall contain:

- Evaluation of whether any use of sub-standard components was due to negligence by the contractor, or a conscious cost-saving measure by the developer.
- Calculation of estimated cost-savings to developer due to use of sub-standard technical specifications, which were not reported in the requests for payments.

- Recommended investment program to bring the project site up to technical norms and standards
- Information on number of connected customers, pointing out if it is lower than the number on the list of connected customers used in the 2<sup>nd</sup> and 3<sup>rd</sup> payment requests
- Information on installed capacity of grid connected renewable energy systems for which the developer received a per kW investment grant, pointing out if capacity is lower than indicated in the subsidy award contract and in the requests for payments.
- Information on what explanations the developer provided when asked by the REFS/EAC/consultant to comment on his observations concerning the irregularities.

REF's officer

- Calculates the repayment amount for breach of contract
- Informs the developer, with copy to the bank providing the guarantee for his repayment of grant, of his breach of contract and required repayment.
- In the case of other forms of guarantee, inform the developer, with copy to the guarantor(s), of his breach of contract and require repayment from the guarantor(s).
- Checks that repayment is received within a month; if not, requests the bank to pay the amount on behalf of the developer

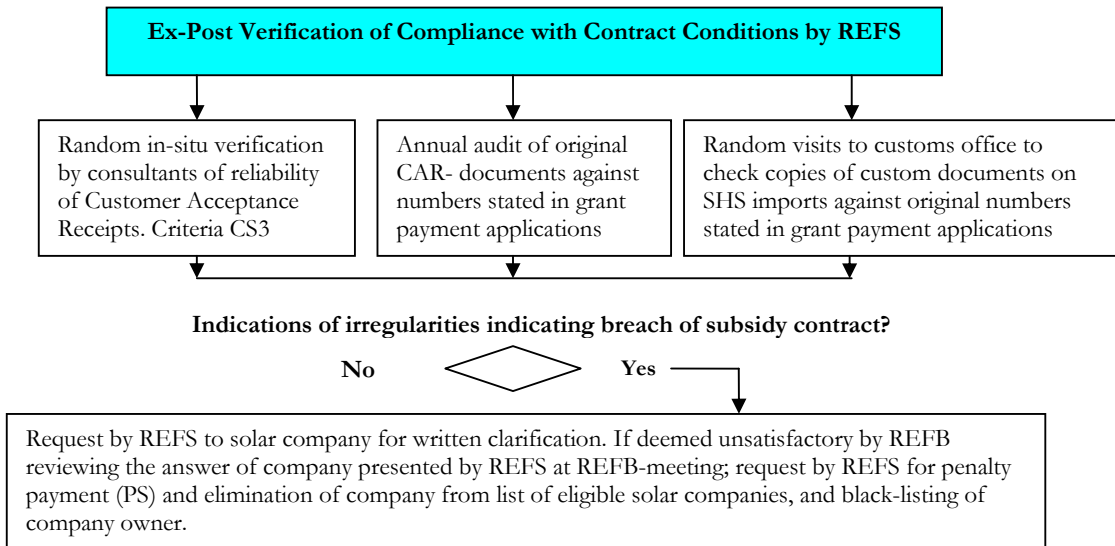
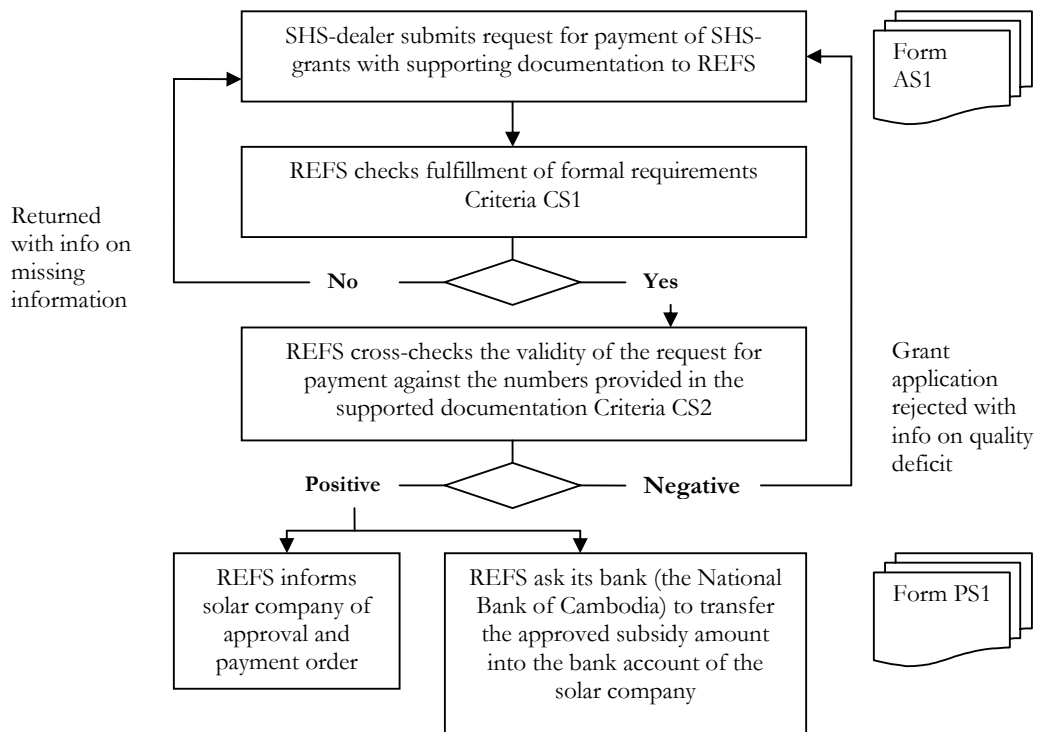
**Recommended Actions for Breach of  
Subsidy Award Contract**

The Subsidy Award Contract states that unauthorized use of sub-standard equipment or over-reporting of connected customers or of installed generating capacity is subject to refund of subsidy. Additionally, these dealers or REEs who use substandard equipment shall no longer be eligible to apply for this subsidy for at least 5 years. The bank connection or other applicable guarantor(s) of the developer must provide a guarantee for refund of the subsidy arising out of breach of contract. REF may also initiate actions against defaulter in the Court of Law in Cambodia.

## Schedule for Disbursement of Investment Grants

|   | <b>First payment</b>  | <b>Second Payment</b>  | <b>Final Payment</b>   |
|---|---|--|--|
| Electricity supply project with diesel generator  | <u>After 30% of construction:</u><br>40% of target number of connected consumers (according to feasibility study quoted in subsidy award contract) multiplied by grant per connected customer | <u>At finalization of construction</u><br>40% of target number of connected consumers multiplied by grant per connected customer   | <u>After three months operation</u><br>Number of connections three months after start of operation multiplied by grant per connected customer minus 1st and 2 <sup>nd</sup> payments   |
| REE grid extension<br>Electricity supply project connected to grid or neighbouring countries.<br>Electricity supply project served by micro-hydro or biomass-fueled generator (possibly with diesel generator as back-up) | <u>After 30% of construction:</u><br>40% of per kW-grant multiplied by plant capacity in kW<br>+ 40% of target number of connected consumers multiplied by grant per connected customer       | <u>At finalization of construction</u><br>40% of per kW-grant multiplied by plant capacity in kW<br>+ 40% of target number of connected consumers multiplied by grant per connected customer | <u>After three months operation</u><br>20% of per kW-grant multiplied by capacity in kW<br>+ number of connections three months after start of operation multiplied by grant per connected customer minus 1st and 2 <sup>nd</sup> payments for connected customers |
| Hydro – or biomass fueled power plant connected to national grid<br>SHS   | <u>After 30% of construction:</u><br>40% of per kW-grant multiplied by plant capacity in kW<br><br>100% after presenting evidence of delivery   | <u>At finalization of construction</u><br>40% of per kW-grant multiplied by plant capacity in kW   | <u>At plant commissioning</u><br>20% of per kW-grant multiplied by plant capacity in kW  |

### 3.3 Disbursement of Grants for Sales of Solar Home Systems



*Criteria CS1: Compliance with formal requirements for SHS-Subsidy*

- REF staff shall prepare a list of solar companies (importer, service including delivery/installation, etc) doing business in the Cambodian market and submit the list for Board approval. The list may be updated every three months. REF will finalize quality standard for SHS in consultation with fund source experts and or other rural electrification projects in the region
- The grant application form is fully and correctly filled out.
- Detailed information in hard copy and in read-only soft copy format is presented on monthly/quarterly installed SHS, containing names and addresses of consumers according to region and to type of installed system.
- The solar company has signed a declaration confirming that the list of customers and size of systems exactly match the information given in the Customer Acceptance Receipts (CAR) and that the original CARs will be kept available for inspection by authorized personnel.
- Copies of custom forms for imports of SHS or SHS-components since the last payment of SHS-grants are attached. The solar company has signed a declaration confirming that the original custom forms will be kept available for inspection
- Has the bank connection or guarantor(s) of the solar company provided a guarantee for payment of required amount in case of breach of contract

*Criteria CS2: Quality check on information provided in the payment request*

- Does the information in the list of CARs match the totals in the subsidy request form?
- Does the information in the copies of the custom forms for imported solar home systems or solar home system components make it realistic to assume that sales corresponding to the scope in the subsidy payment request could have been reached?

*Criteria CS3: Check list for in-situ verification of Customer Acceptance Receipts*

- Do the households having signed the CARs all exist in the project area?
- Do these households have a SHS installed and working properly?
- Do the serial number and the size of the system match the information in the CAR?
- Do the technical specifications of the installed systems match the quality criteria for companies included on the list of eligible companies for REF-grant support?
- Has after-sales-service been provided as promised?

*Sanctions for Breach of Contract*

- Refund of entire amount that was paid to the solar company.
- Elimination of the company from list of solar companies eligible for SHS-grants and for REF-financed TA to solar companies

## Chapter 4

### Identifying Technical Support and Capacity Building Needs

#### 4.1 Responsibility for Identifying Needs

During the implementation phase, the technical officer, finance officer, Executive Director with assistance from technical advisors and other relevant consultants shall identify the needs of technical support and capacity building. Technical support and capacity building are directed to the developers, the REEs, renewable technology companies, financial institutions, NGOs and other stakeholders.

The information available with REFS from the field, other sources including progress reports and evaluation reports will be used to help design specific technical support and capacity building program. REFS may consult with the target group of recipients and experts for designing the program.

The Executive Director of REFS maintains a close dialogue with senior representatives of agencies involved in rural development on measures they can take to make use of the productive potential of electricity in their programs.

#### 4.2 Scope of Capacity Building Programs

##### 4.2.1 Targeted business sectors

The targeted business sectors to benefit from the technical support and capacity building program include:

- (i) Project developers, REEs;
- (ii) RE-consultants, RE construction companies and other businesses involved in the production, installation, supply of equipment, O&M and other RE-related services;
- (iii) Financial intermediaries providing loans to Rural Electrification and Renewable Energy Technology investments, the participating financial institutions (PFIs).

##### 4.2.2 Scope of Technical Support

Support to the supply side in RE covers TA at all stages - pre-investment; start up and early business and market development, business improvement and growth:

- (i) *Promotion of productive uses of electricity* in on-farm and off-farm production. TA to small and medium scale rural enterprises on the financial feasibility of investments in electricity consuming equipment, and the preparation of business plans for investments making productive use of electricity.
- (ii) *Rural Income Generation Promotion*: TA to develop end-use of electricity to increase income generation opportunities in rural areas and enhance productive use.
- (iii) *REE improvement and Association building*: TA in management, finance, customer relations, billing and invoicing and O&M to *community owned and small scale private RE-utilities* including training of REEs and demonstration of international and regional best practices.
- (iv) *Cost shared TA for Business Development for Renewable Energy*: Cost shared TA for preparation of feasibility reports, business plans, technical training, awareness programs and promotion of the use of renewable energy sources. Separate activities



will address solar and hydro power with possible extension to bio-mass as well. The TA will also cover technician training, training of NGO and private sector entrepreneurs on renewable energy technologies, regional and international study tours and participation in international conferences.

### **4.3 Principles for Cost-Sharing and Subsidy Rates**

The willingness of private sector entities to pay for capacity building assistance expresses the target group's appreciation of the quality and the relevance of offered TA. Private companies, which receive business development services or sent staff to capacity building seminars, shall pay 30% of the specific cost of the training service. The TA enhances the professional qualifications of the companies for offering goods and services to the RE sector, and thereby the market value of their know-how.

The feasibility reports and business plans prepared by the consultant and available with REF will be provided free of charge to the project developers.

*TA to businesses* for enhancing their productive uses of electricity is provided free of charge.

### **4.4 Consultants contracted and supervised directly by REFS**

Activities that help developing and strengthening the core competences of the REFS are implemented by the REFS Units themselves. Consultants are hired to produce specific inputs, but the production of final outputs remains in the hands of REFS staff. Examples are:

- Performance of *regional information seminars and other outreach activities* by REFS staff. Media consultants assist in preparing materials for the seminars and in developing the public media campaigns.
- *M&E reports on the effectiveness of policy instruments and administrative procedures* being used by the REF.

## Chapter 5 Procurement

### 5.1 Procurement under Sub-Grant

Goods, services and construction works can, as a general rule, be procured by developers in line with established local private sector commercial practices. REF-grants are fixed according to objective criteria independent of the cost of investment, and finance less than 50 percent of the total investment, giving investors strong economic incentives in procuring goods and services at least cost.

Since the cost of investment influences the level of electricity tariff, which the EAC is willing to accept during negotiations leading to the award of the license for the project, REFB and EAC will define rules and procedures to provide maximum cost-transparency.

The cost-estimates being used in the feasibility study and the tariff calculation schedule of the developer will be benchmarked against the numbers in the REF/EAC data base on regional costs of goods and services in Cambodia.

In addition, for large procurement packages with estimated cost exceeding US\$2 million per package International Competitive Bidding (ICB) will be the compulsory procurement method.

### 5.2 Procurement by REFS

#### 5.2.1 General Rules

Goods and works shall be procured in accordance with the provisions of Section I of the “Guidelines for Procurement under IBRD Loans and IDA Credits” published by the Bank in January 1995 and revised in January and August 1996, September 1997 and January 1999 (the Guidelines).

Procurement methods for goods and works shall be in accordance with Schedule 1 Procurement, Section I of the Project Agreement dated November 15, 2004 under Credit No. 3840-KH.

Employment of Consultants shall be procured in accordance with the provisions of Section I and IV of the “Guidelines: Selection and Employment of Consultants by World Bank Borrowers” published by the Bank in January 1997 and revised in September 1997, January 1999 and May 2002 (the Consultant Guidelines).

Methods for employment of Consultants shall be in accordance with Schedule 1 Procurement, Section II of the Project Agreement dated November 15, 2004 under Credit No. 3840-KH.

Services of individual consultants for tasks that meet the requirements set forth in paragraph 5.1 of the Consultant Guidelines shall be procured under contracts awarded in accordance with the provisions of paragraph 5.1 through 5.3 of the Consultant Guidelines.

### 5.2.2 IDA Prior Review

For procurement of goods and works for REFS operation, IDA prior reviews are for the contracts as below:

- (a) With respect to each contract for works estimated to cost the equivalent of \$500,000 or more and each contract for goods estimated to cost the equivalent of \$200,000 or more.
- (b) With respect to each contract for goods to be procured under International and National Shopping estimated to cost the equivalent \$75,000 or more, the procedures for prior review as set forth in Schedule 1 Procurement Part D 2(b) of the Project Agreement shall apply.

For consultant services, IDA prior reviews for Selection of Consultants shall be as below:

- (a) With respect to each contract for the employment of consulting firms estimated to cost the equivalent of \$100,000
- (b) With respect to each contract for the employment of individual consultants to be selected on a sole source basis, or estimated to cost the equivalent of \$50,000 or more.

At the time of preparation of this operation manual, the RGC is in the process of selecting an independent procurement agent (IPA) to conduct procurement on behalf of all the projects including the REF project. When the IPA becomes available, all REF's procuring activities will be turned over to the IPA.

### 5.2.3 IDA Post Review

With respect to each contract not governed by **the above**, the procedures set forth in paragraph 4 of Appendix 1 to the Guidelines shall apply.

### 5.2.4 Authority for Authorizing Operating Payments

All expenditures are duly authorized by the REFB through its adoption of the annual budget and budget amendment and approved by the Bank. The process for authorizing operating payments shall be as follows:

**Operating expenses** such as payroll including TA pays (except the Executive Director's pays and his claims for reimbursement), taxes, office rent, local transportation, routine supplies, utilities (water, sewer, electricity, telephone, internet), maintenance costs, office miscellaneous items shall be submitted to the Finance Officer for due diligent verification. The Executive Director shall have authority to authorize payment, sign off check/disburse for all payments related to operating expenses. All operating payments authority for the Executive Director shall mean a cumulative limit of up to US\$20,000 per month.

The Executive Director shall promptly notify the chairman of the Financial Management Committee of his unavailability, for a period of longer than 5 working days, to perform this disbursement duty. Upon, receiving this notice, the chairman of the Financial Management Committee shall be the signer for all authorized payments under the category of Operating Expenses until such time when the Executive Director becomes available. The chairman of the Financial Management Committee shall have operating payments authority up to a cumulative amount of US\$20,000 per month.

### 5.2.5 Authority for Authorizing Major Payments

All expenditures are duly authorized by the REFB through its adoption of the annual budget, budget amendment and approved by the Bank. Any expenditures/payments in excess of US\$10,000 per transaction shall be authorized by two signatures: the chairman of the Financial Management Committee and the Executive Director.

### 5.2.6 Authorized Signers of Check in REF's Name

The Executive Director shall sign all checks within his/her authorized limit. The chairman of the Financial Management Committee is a backup signer for the Executive Director. The Chairman of the Board is a backup signer for the chairman of Financial Management Committee.

The chairman of Finance Committee shall be authorized to sign check for payments claims by the Executive Director.

### 5.2.7 Authority for signing contracts

#### 1. TA Consultant Contract

- TA Consultant contract with nationals shall be signed by the Executive Director.
- TA Consultant contract with a value higher than US\$20,000 shall be signed by the Chairman of the REF Board.

2. Operating Contracts. The Administrative Officer shall perform due diligence and submit request for approval to the REFS Executive Director. Operating Contract includes: goods, furniture, equipment, internet, phone services, maintenance, staff, and office-miscellaneous. The Executive Director shall be authorized to approve and sign off on all Operating Contracts.

All purchases of good and service and subsidy shall be approved according to the adopted budget and any amendments.

### 5.2.8 Authorized Signer for subsidy Approval

After due process and due diligence are completed, the authorize signer(s) for the subsidy approval is as follows:

| Signer(s)          | New Connection            | Solar                     | Micro hydro               | Mini Hydro                |
|--------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Executive Director | 10 to 444                 | 200 unit of 40 Wp         | up to 50kW                | N/A                       |
|                    | up to US\$20,000          | up to US\$20,000          | up to US\$20,000          | N/A                       |
| REFB approval      | more than 445             | more than 201             | more than US\$20,000      | more than US\$20,000      |
|                    | more than US\$20,000      | more than US\$20,000      | per project               | per project               |
| IDA's no objection | >=US\$200,000 per project | >=US\$200,000 per project | >=US\$200,000 per project | >=US\$200,000 per project |

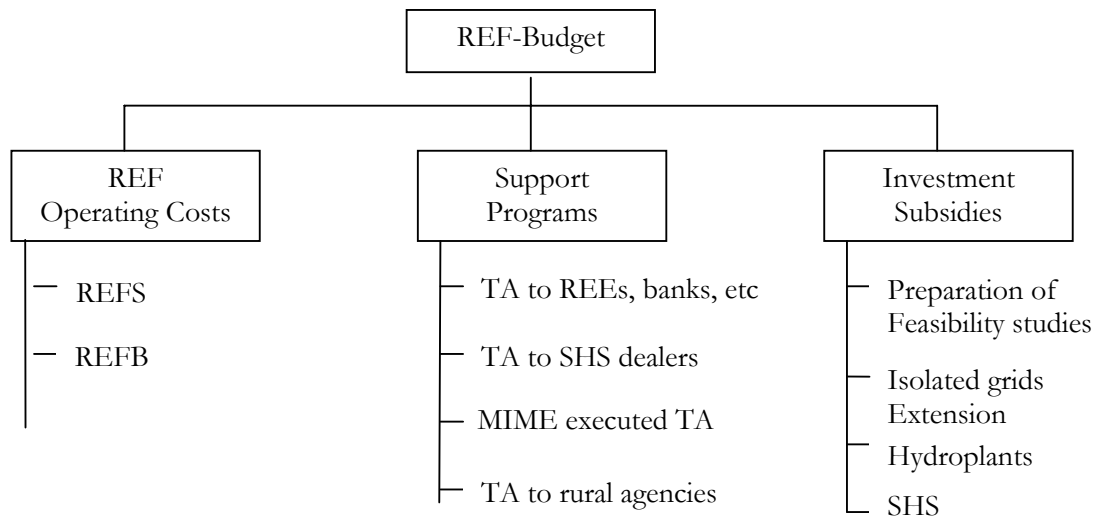
**Chapter 6**  
**Financial Management and Use of Funds**

**6.1 Flow of Funds - Overview**

The financial management and financial reporting obligations of the REF could become quite complex within a few years. The complexity depends on (i) how the RE-program of the Government of Cambodia develops, (ii) the Government’s success in attracting funds for rural electrification and renewable energy, and (iii) the scope of the role, which the Government assigns to the REF.

Currently, Funds of the REF are used:

1. To cover the *operating cost of the REF*, composed of:
  - (i) attendance fees to members of the REFB for participation in board and meetings.
  - (ii) the annual cost of the contract with the REF auditor once he or she is appointed by the REFB;
  - (iii) the “internal costs” of operating the REFS (outsource fees, non-TA local consultant service fees, overhead costs and programs implemented by the REFS itself).
  
2. To finance the cost of *RE and RET support programs* (sub-contracts with outside institutions for the execution of capacity building and information activities). This includes the cost of MIME-executed TA under the IDA-loan.
  
3. For investment subsidies – to *(pre)feasibility studies and physical investments*.



Separate budgets are established each year for the above, which in turn are sub-divided into individual budget lines. The annual budget for REF operating costs and REF-support programs has a fixed upper limit; the annual REF budget for subsidies to feasibility studies and investments is an *indicative open-ended budget*. If demand for investment subsidies is stronger than expected, extra funds can be drawn on the IDA loan within limits established by the loan agreement.

## 6.2 Responsibility for Financial Management

### 6.2.1 Financial Management Committee of the REFB

The *Financial Management Committee (FMC)* of the REFB is composed of three members of the REFB. The chairman of the Financial Management Committee shall be any member of the Board who has experience in risk management and policy or management of renewable energy or public utility business. Two other members of the Financial Management Committee shall be the donor representative and any member of the Board.

The FMC undertakes in-depth reviews of REF financial management issues prior to their discussion at REF Board meetings. Responsibilities include:

- to be consulted by REFS-staff early in the annual budget planning process;
- review of quarterly FMRs and audited annual financial statements for the status of annual REF spending and its individual components: the REFS's budget, accounts and of implementing agencies under contract with REFS.
- determining the adequacy of the financial management and accounting system.
- Checking financial performance indicators such as operating costs of REFS in % of total REF

### 6.2.2 REF- Head of the Finance Unit

The REF head of the finance unit reports directly to the Executive Director. The responsibilities comprise:

1. To perform the daily financial management control and reporting, comprising:
  - responsibility for the design, implementation and management of Rural Electrification Fund Secretariat (REFS) financial procedures;
  - ensuring timely payment to all Rural Electrification Fund (REF) personnel, technical assistance and other works and services concerning particularly payroll and out-of-pockets expenses;
  - development and implementation of internal control rules and regulations related to financial and accounting systems;
  - the daily maintenance of financial ledgers agreed schedules of regular (monthly, quarterly, yearly, etc.) reports, particularly on timely Financial Management Reports meeting the Donors, Ministry of Industry, Mines and Energy (MIME) and Ministry of Economy and Finance (MEF)'s requirements, to the Executive Director, on the financial status of REFS and its budget situation;
  - approve administrative and sub-project disbursements according to REFS policies procedures in response to the Executive Director's request;
  - prepare and facilitate external audits works, by ensuring that the audit reports to all donors and the Royal Government of Cambodia (MIME and MEF, in particular) are timely met;
  - *Processing of subsidy applications*, according to the REF Operational & Financial Management Manuals, which would involve verification of eligibility, subsidy grant calculation, contract development, and authorizing payments.
2. *Promoting the supply of financial services for Rural Electrification Investors.* Within REFS, the Finance Unit is the knowledge centre for issues related to the financing of Rural Electrification projects. This involves:

- maintaining close contacts with financial intermediaries involved in Rural Electrification funding and the Association of Micro enterprise Finance Institutions of Cambodia as well as with the Association of Banks of Cambodia (ABC), for exchange of information and opinions on experiences with the financing RE projects and the needs of project promoters;
  - closely consult relevant financial intermediaries on the design of the application forms for investment subsidies in order to ensure that the REFS information is similar to the information required by the financial intermediaries in their parallel appraisal of the project for the loan application;
  - to keep up-to-date on international and national discussions on new financing concepts and institutional modalities and assist in developing and adjusting RE financing concepts that are used and tested in Cambodia;
  - to encourage financing institutions to assist project developers in co-financing the initial up-front investment costs to consumer for internal installations and connection charges.
3. Any other tasks as required by the Executive Director.

The head of the finance unit shall conduct monthly discussion of financial status with the Executive Director and identify key issues that require Board's decisions.

### **6.3 Procedures for Transfer of Funds, Flow of Funds**

#### **6.3.1 REF Counterpart Fund Account set up by Minister of MIME**

Government counterpart funds are channeled through the Counterpart Fund Account. A special deposit account in the name of REF is set up by the Ministry of Industry, Mines and Energy at the National Bank of Cambodia into which all national counterpart funds for the REF shall be deposited. The Counterpart Fund Account shall receive an initial deposit of US\$10,000 from MEF. The Counterpart Funds Accounts will be periodically replenished from the Government (monthly or when the amounts withdrawn equal 20% of the initial deposit, whichever comes first).

#### **6.3.2 Accounts set up by IDA/GEF or donor for transfer of funds to the REF**

IDA/GEF or a donor collaborating with the REF opens a Special Account in US Dollars with the National Bank of Cambodia (NBC) for the deposit of his funds that are destined for the REF as per the Specific Credit Agreement signed by the Royal Government of Cambodia and the IDA/GEF or donor.

The IDA/GEF or donor's account can be an account for transfer of funds to the *general budget* of the REF or to a *special purpose project account* opened by the REF for a specific RE/RET program, and for which the REF is Implementing Agency. The first external funders being the IDA and GEF two accounts are opened by these at National Bank of Cambodia:

- the Special IDA Account to receive the funds from IDA (an example of a "general budget" account, financing both operating expenses of REFS and investment grants for REEs).
- the Special GEF Account to receive the funds from GEF ( an example of a "special purpose budget", as the funds will be used to finance TA and investment grants exclusively for renewable energy activities).

### 6.3.3 Transfer of funds or Replenishment from IDA/GEF or a donor account to a REF account

IDA/GEF or a donor, who has agreed to provide *grant-support the General REF Budget*, transfers or replenishes his funds into the *REF account* on a monthly basis, in accordance with the procedure in the grant agreement and/or when the amount withdrawn equal 20% to the initial deposit whichever comes first.

The draw-down of *concessional loans awarded to the REF*, such as the IDA-loan, is done gradually, when the liquidity need for it arises.

A donor, who has signed an agreement for a special purpose project/program with the REF as implementing agency, transfers his funds into the *specific project account* opened by the REF for his project/program.

### 6.3.4 Procedures for withdrawals from IDA account and GEF account

IDA funds are channeled through the IDA Special Account for the REF. IDA deposits an advance within the authorized allocation to the IDA Special Account based on the application by REF. The REF uses the Special Account to finance IDA's share of eligible expenditures under the Project in foreign and local currencies, and then claiming for replenishment of the Special Account. For some expenditures with the amount over the minimum application size set up in the Disbursement Letter (20% over the outstanding advances to the special account), the REF may submit withdrawal applications to request IDA to make payments directly to the REE.

Withdrawal of IDA funds. Disbursement of IDA funds is based on:

- Statement of Expenditures (SOE),
- Withdrawal Applications (WA) or
- Direct Payment Applications.

Disbursement from the Special Accounts to the REF requires the signatures of the Minister of Economy and Finance or his designate and the representative from REF Board.

Initially, until the REFS is established, MIME manages the GEF and IDA accounts.

### 6.3.5 Project Accounts for Special Purpose Projects

When a donor, other than the World Bank, signs an agreement with REFB/RGC for providing finance, not to the general annual budget of the REF, but to specific activities, a *Project Account* will be opened for this "special purpose project". The procedures for the draw down of funds from this account shall be defined in the project agreement signed between the donor and MEF. Where appropriate, the REFB Chairman shall sign the agreement on behalf of the REF.

### 6.3.6 Transfer of funds from the REF account to Support Programs

Funds inscribed in the annual REF budget for Support Programs are transferred from the REF-account directly to the *bank accounts of the beneficiaries*.



### 6.3.7 Petty Cash Process

The petty cash withdrawal and replenish procedures shall be established in the financial management manual and policy. REF's petty cash limit shall be US\$1,000.

## 6.4 Quarterly FMRs

### 6.4.1 Quarterly Financial Monitoring Reports (FMR)

FMRs integrate project accounting, procurement, contract management and disbursement with physical progress of project implementation. The FMRs provide linkages between expenditures and physical progress, including information under three main categories:

A *Financial Management Report* which includes

- (i) Discussion of project's progress report
- (ii) Balance Sheet;
- (iii) Sources and Uses of Funds Statement;
- (iv) Uses of Funds by Project Activities;
- (v) *Project Progress Report* to provide information on project implementation progress in physical and financial terms using monitoring indicators and which explains variances between actual physical and financial progress versus forecasts;
- (vi) *Procurement Management Report (PMR)*, which shows procurement status and contract commitments and expenditure including source of supply data for contracts.

REF submits FMRs to IDA on a quarterly basis within 45 days of the quarter end starting the first quarter following Project's first disbursement. Additional output monitoring report and key performance indicators will be identified and developed to suit project needs during implementation as appropriate.

## 6.5 Statements of Expenditure (SOEs)

During the operation of the REF, disbursement will be on the basis of *Statements of Expenditure (SOEs)*. An advance will be made into the Accounts upon Credit effectiveness. Subsequent replenishments will be made on the basis of *withdrawal applications and SOEs showing payments made out of the Account*.

Proceeds of the Credit/Grant expected to be disbursed on the basis of SOEs are:

- works estimated to cost the equivalent of US\$500,000 or less;
- goods estimated to cost the equivalent of US\$200,000 or less;
- consulting firms estimated to cost the equivalent of US\$100,000 or less;
- individual consultant's contract estimated to cost the equivalent of US\$50,000 or less;
- and
- REF sub-grant, no matter the cost.

Disbursement for any expenditure exceeding the above limits will be made against submission of full documentation and signed contracts.

The documentation supporting SOE disbursements will be retained by the Project during the life of the Project and until one year after the receipt of the audit report for the last year in which the last disbursement would be made. These documents will be made available for review by the auditors and IDA supervision missions.

Should the auditors or IDA supervision missions find that disbursements have been made that are not justified by supporting documentations, or are ineligible, IDA will have the right to withhold further deposits to the Special Accounts. IDA may exercise this right until the Borrower has refunded the amount involved or (if IDA agrees) has submitted evidence of other eligible expenditures that offset the ineligible amounts.

## 6.6 Interim Arrangement for REF upstart

A consultant will design, implement, and initially operate a financial management system with proper procedures and control and supervise during the first few months of the REF's operation. The consultant will recommend a suitable off the shelf financial management system for REF's financial management system. The consultant provides necessary training of REF staff, and will slowly phase-out as capacity is built within the organization.

Preparation of consolidated accounts by REF. The Finance Officer assisted by his/her staff will also handle the disbursement arrangement and accounting books for MIME activities once the MIME-PMU is ceased; and prepare consolidated FMRs for MIME-TA, REF and EAC-TA activities where applicable.

## 6.7 Planning and Budgeting

The REF's fiscal year end is December 31 which is the same as the fiscal year end of the national budget. The REF Secretariat is responsible for preparing annual plan and budget of the Project, with the inputs from responsible units, funding sources, and other relevant parties. Draft of the annual plan and budget is submitted for the Financial Management Committee. Upon approval by the Financial Management Committee, the draft of plan and budget will be presented and discussed at annual assembly of the stakeholders before final adoption by the REFB. This should help ensure that financial resources are available for project implementation and coordinated with the procurement plans.

### 6.7.1 Planning and Budget Cycle

Planning process begins during the 2<sup>nd</sup> week of June and ends in the third week of December. The process is as follows:

#### Round I-Baseline Budget (2<sup>nd</sup> week of June – second week of August)

- Review life to date, year to date spending and explain any variances from the budget and actions taken to reduce risks.
- Re-estimate or reconfirm current year spending.
- Identify and propose priorities for the coming budget year.
- Identify and discuss any budget issues
- Compile budget figures for the coming year.
- Forecast monthly, quarterly, annual spending pattern
- Provide three years of forecast spending (revision of current year plus two years forecast).

REF submits the draft plan and budget to the Financial Management Committee for further discussion and policy consideration no later than August 15.

#### Round II-Adopted Budget (3<sup>rd</sup> week of August – 3<sup>rd</sup> week of November)

- Change or confirm priorities as directed by the Financial Management Committee

- Change or confirm budget figures
- Update projected monthly and quarterly spending
- Update the three-year projection.
- Finalized the proposed plan and budget documents for distribution to relevant parties.
- Develop presentation package of the plan and budget to be presented and discussed at the annual assembly of stakeholders.
- The proposed plan and budget is adopted by the Board and to be submitted to the minister of MIME for approval. So long as the chairman of the Board is himself or herself the minister of MIME, no additional submittal is needed.
- The adopted budget and plan documents are sent to MEF.
- The adopted budget and plan documents are sent to IDA and GEF (or its implementing agent) for an NOL.
- Adopted plan and budget documents are posted on the appropriate websites.

The Financial Management Committee introduces the proposed annual plan and budget to the full board at the annual assembly of stakeholders. The REFS assists in answering questions from the Board and stakeholders. The annual assembly should take place during the 3<sup>rd</sup> week of November with the budget NOL from WB to be issued before November 30. The adopted budget takes effect January 1 of each year.

### 6.7.2 Budget Amendment

The budget amendment may be proposed and adopted at the Board's quarterly meeting. The adopted amendment requires a no objection from IDA.

### 6.7.3 Responsibility during plan and budget process

The *REFS unit-heads* prepare the budget proposals for budget lines referring to their specific areas of activity and work in collaboration effort in order to complete the tasks comprehensively and to meet the deadlines as mentioned above.

The *REFS-Executive Director in collaboration with the Finance Officer* consolidates the individual budget proposals into a draft REFS budget, cutting down on cost items considered excessive.

After discussion and approval by the *REFB* of the draft budget, the REFB submits the budget proposal to the *Minister of MIME*.

The budget proposal is discussed at the *Annual Assembly of Stakeholders*, before final adoption by the REFB.

REFB is responsible for keeping the operating cost of the REFS as a percentage of the annual REF budget as low as possible without impairing the efficiency of the REFS. The trend in the percentage is discussed at the Annual Meeting of Stakeholders.

## 6.8 Accounting System

IDA guidelines and procedures for disbursements, auditing and overall financial management require the REF to:

- maintain the Project's books of accounts,
- monitor overall project disbursements,

- request replenishment of the Special Accounts and the Counterpart Funds Accounts (where applicable)
- coordinate with the MEF on annual counterpart fund requirements (where applicable),
- prepare withdrawal applications for the MEF to submit to IDA,
- produce quarterly Financial Monitoring Reports (FMRs),
- Prepare annual financial statements, and having them audited by an external auditor acceptable to the IDA.

The books of accounts for REF activities include:

- (i) Cash Bank Book
- (ii) Ledgers
- (iii) Vouchers
- (iv) Contracts Register

The Chart of Accounts should be developed in a way that allows project costs to be directly related to specific work activities and outputs of the program/project.

Accounting policies will be in accordance with International Accounting System (IAS) applicable for project accounting. REF's financial management should include at least the following policies and procedures:

- Cash on hand and in bank
- Advances (cash advances)
- Purchasing including expendable supplies
- Non-expendable property and equipment
- Salaries and wage
- Subsidy payment
- Month end procedures
- Year end procedures
- Receipt

MIME/PMU is in the process of selecting a consulting firm to develop a financial management system for its operation.

The computer-based accounting system will contain: (a) a chart of accounts and a coding system capable of capturing transactions classified by project components and IDA disbursement categories, sources of fund, specific account (b) use of the cash method of accounting; (c) a double entry accounting system; and (d) the production of annual financial statements, quarterly, and monthly FMRs acceptable to IDA and other funding sources.

Because of the relatively small size of the REF's operation, a suitable off the shelf financial system can be used to keep track of financial transactions and generate necessary financial reports.

## **6.9 Auditing**

The REF's accounts and financial statements are audited in accordance with International Standards on Auditing by an independent external auditor appointed under terms of reference satisfactory to IDA.

The REFS submit the audited financial reports to the REFB, the Minister of MIME, Minister of MEF, WB and other co-financing donors. The annual cost of the auditing firm is paid by the REF-budget.

The auditor audits the consolidated project financial statements of the REF, and the MIME-TA and EAC-TA components. In addition, the audit will determine:

- (i) whether the activities of the Special Accounts associated with the respective project funds have been correctly accounted for and used in accordance with the IDA Credit and Grant Agreements; and
- (ii) the adequacy of supporting documents and controls surrounding the use of the Statement of Expenditures (SOEs) as a basis for disbursement.

A separate Management Letter will also be submitted which will:

- (i) identify any material weakness in accounting and internal control;
- (ii) report on the degree of compliance of financial covenants of the Credit and Project Agreements; and
- (iii) communicate matters that have come to the attention of the auditors which might have a significant impact on the implementation of the Project.

The audited financial statements will be submitted to IDA within six months after the end of each fiscal year.

#### Management Letter

Upon receiving a draft of the management letter, the REFS shall respond in writing to accept the recommendations or explain the circumstances and or take necessary course of actions to implement the auditor's recommendations. The written response is to be reviewed by the Financial Management Committee and submitted to the Chairman of the Board for approval, prior to sending it back to the external auditor.

## Chapter 7 Disclosure of Information

### 7.1 Management Information System (MIS)

#### 7.1.1 Type of management information needs

The management information needs can be categorized into:

1. Financial and Accounting Information (provided by the periodic financial status reports and procurement reports).
2. Project progress – quantitative information on target achievement in terms of (i) number of electrified communities, households and institutions and (ii) number of trained consultants and operators, etc. (provided by project progress reports).
3. Cost-effectiveness analysis - of REF-policy instruments, procedures and choice of areas of intervention (provided by internal surveys, benchmarking and other monitoring indicators, evaluation reports, survey interviews with clients and collaborating financial institutions).
4. Impact analysis – quantitative and qualitative information on the socio-economic changes in electrified communities (provided by M&E-reports).

#### 7.1.2 Hierarchy of Management Information Needs

The management information needs related to the operation of the REF run through four layers of hierarchy:

1. At the bottom level are the *individual technical officers* who manage the individual, specific activities of the REF. They are consumers of the basic raw data and producers of the initial processed data, which composes the MIS.
2. Next come the *administrative officer and the Executive Director* who monitor the use of funds and the performance of REF officers;
3. Then the *REFB* who is ultimately responsible for the financial management of the REF and for the specific choice of instruments and areas of intervention;
4. At the top level, the *Ministers of MIME and MEF and donors* want information to control (i) that - compared with alternative uses of funds - they get value for money by supporting REF-activities and (ii) that the REF-funds are not deviated to other purposes than the intended.

For each level, it is to be defined:

- i. what kind of information is needed for decision taking at that “level” so that the functions assigned to that “level” can be performed in an effective manner;
- ii. how the required information is to be collected;
- iii. in what form the collected information is to be synthesized and presented to the upper layer;
- iv. how the collected information is to be integrated into the REF data base, and thus, be available for the MIS.

#### Financial Information for financial management

REFS shall keep physical record of all financial transactions to allow for appropriate audit trail and transparency of the transaction itself. Financial transactions (purchases, withdrawals, disbursement, etc.) are recorded into the financial system according to the accounting principles accepted by International Accounting System. The financial system generates periodic financial reports such as sources and uses of fund, expenditure report, balance sheets, etc. The project finance officer is responsible for actual entering of data and maintaining physical record keeping of this financial information with supervision from the head of finance unit. The reports and support documents shall be accessible by Executive Director, authorized personnel, Board members, auditors, and funding sources (IDA, GEF, other if any). Where soft copy version of the document is possible such information shall be housed in a database for future reference. The database is developed and managed by the Information Officer.

#### Industry data

The information officer keeps record of relevant documents, statistics, surveys, geographic, sub project awards, economic and demographic stats, etc. Where applicable, information is to be scanned and or transferred into soft copy version and made available via appropriate websites.

The information officer shall assist in the creation of database of profile (location, size of asset, years in business, number of customer, type of service/product, etc.) of industries related to the rural electrification fund. Industries such as bank, financial institution, hydro construction contractors, dealers/importers/manufacturers of alternative energies (solar panel, bio waste, wind power, etc). This information can be developed in collaboration with MIME, EDC, EAC, and other trade associations.

#### Rural Electrification Enterprise data

The information officer shall assist in the creation of database of profile of REE in the country. The profile includes-demographic statistics of the region it serves, financials, progress report, type of electricity source, number of customers, location, quality of service, etc.

### **7.1.3 Collection and initial processing of data for the MIS**

Being responsible for the initial data entry and the initial processing of data for the MIS, each Head of Unit is held accountable for the systematic collection of data, which is relevant for the work of the unit, and the assessment of its performance.

The M&E-officer of REPMEU assists the Heads of FU, and REU in finding appropriate responses to the four questions listed in section 7.1.2, above.

In the monitoring of the performance of a sub-contractor, the Head of the Unit is responsible for ensuring that the contracted entity:

- presents all required *financial reports* and *progress reports* timely and in accordance with the format defined in the contract;
- at the end of a *capacity building seminar*, asks the attendants to fill out a *user-satisfaction questionnaire*, rating the relevancy of the content and the quality of the trainers and coming up with suggestions on improvements.

*Project Implementation Plans* for the executing agents address the following areas:

1. Inputs and outputs of *financial information* required to track implementation;

2. Inputs and outputs of *physical information* matched with financial information required;
3. arrangements for recording project impacts, outcomes, outputs, and inputs that are required to assess project progress toward project objectives.

The REFS-Executive Director monitors that the Unit-Heads:

- summarize their conclusions and observations on received progress reports in a short, concise note;
- write short notes in standard format on field visits and participation at seminars or outreach meetings summarizing (i) number and type of attendants, (ii) subjects discussed, (iii) key impressions of feedbacks and lessons learned.

The summaries and notes are entered in the data base operated by REPMEU, and are accessible to all REFS-staff.

## 7.2 Fiscal Year Financial Report and Annexes

Once the financial accounts for a fiscal year have been audited, the REFB submits the *fiscal year financial report on the REF* to the Minister of MEF, Minister of MIME, and to co-financing donors. The report covers the consolidated financial accounts of the REF comprising the general REF-budget and the budgets for special purpose projects/programs that are implemented by REF. The financial statements presented in the report include:

- *Statement of Sources and Uses of Funds and balance sheets* showing funds from the different donors and national sources of revenue separately, a summary of expenditures analyzed under the main headings and by main category of expenditures
- *Notes* in respect of significant accounting policies and accounting standards adopted by management when preparing the accounts and any supplementary information or explanations that may be deemed appropriate by management in order to enhance the presentation of a “true and fair view”.
- *Special Account Statement* showing deposits and replenishments received, payments substantiated by withdrawal applications, interest that may have been earned on the account and the balance at the end of the fiscal year.
- *A Reconciliation* between the amounts shown as “Received by REF from IDA” and that shown as having “Disbursed” by them.
- *Summary of Credit Withdrawals* using program management reports, FMRs, listing individual withdrawal applications by reference number, date and amount.

## 7.3 Public Dissemination Policy

### 7.3.1 REF progress reports and annual RE-Status Report

The Executive Director of the REFS prepares *three short REF progress reports* to the REFB during a year and one detailed *RE-Status Report*. REFB approves the reports before submitting the reports to the Minister of MIME and to co-financing donors and multilateral development banks.

The progress reports and Status Report synthesize the information of progress reports received from sub-contracted consultants and summarizes the results from M&E.



### **7.3.2 Annual RE-Status Report**

The annual RE Status Report, prepared by the REFS Executive Director and approved by REFB is submitted to the Minister of MIME and the Annual Assembly of Stakeholders roughly one month before the start of a new fiscal year. This report includes the progress in RE in general, and of REF-financed activities in particular, and summarizes the qualitative and quantitative M&E information on RE, which the RREFS collected during the year, since the presentation of the last report. The Office of the Council of Ministers and related business and NGOs are other target groups for the report.

The report (i) informs on:

- a. the advancement of RE and its impact on the rural transformation objective;
- b. the efficiency and the impact of the REF investment subsidies and the procedures for these,
- c. the results and effectiveness of REF-financed capacity building programs,
- d. the results and cost-effectiveness of programs to commercialize RETs,
- e. RE-and RET project activities, which are financed outside the REF-framework by NGOs and other donor programs;

and, (ii) presents the budget and work program for the next year REF-activities, including the proposed subsidy rates and eligibility criteria.

After approval by the Ministry of Industry, Mines and Energy and by donors, the annual RE-status report is published on the REF website.

### **7.3.3 Publication of M&E reports**

The REFB decides on the publication of M&E reports.

### **7.3.4 Publication of eligibility criteria and subsidy rates**

REFB resolutions on annual eligibility criteria and subsidy rates are published in the annual invitation for subsidy applications, which is placed on the REF website and in major newspapers.

## Chapter 8 Monitoring and Evaluation

### 8.1 Objectives for Monitoring and Evaluation (M&E)

M&E reports are prepared to provide the REFB, the RGC and co-financing donors and multilateral banks with information on:

1. The status of national RE and the role of the REF herein, making use of *output indicators* for the REF. The information documents that output targets for individual REF-activities are being achieved.
2. The socio-economic impact of RE projects (*impact indicators* for the REF). The information helps the Ministry of Economy and Finance and co-financing donors and multilateral development banks to determine whether the amount of public resources allocated to the REF are justified by their socio-economic impacts.
3. The effectiveness of REF procedures and the relevancy and cost-effectiveness of REF-financed support programs (*program adjustment indicators* for the REF). The information gives the REFB the qualitative and quantitative data needed to take informed decisions on recommended subsidy levels, eligibility criteria and procedures, the REF budget and the annual REFS work program, including the launching or closing of individual support components.

### 8.2 Organization of M&E

Monitoring and evaluation is undertaken through evaluation by REFS and through contracted external consultants and other organizations like EAC, EDC.

As inputs to the preparation of the Annual Rural Electrification and REF-Status Report, REF officers are requested to contribute their assessments and evaluations of the effectiveness of REF procedures and REF support projects in their areas of responsibility.

The initiative for specific M&E-reports executed by external consultants can come from the REFS-Executive Director, from the REFB and from any co-financing donor/multilateral development bank.

The *Rural Electrification Planning and Monitoring & Evaluation Unit (REPMEU)* of the REFS is responsible implementing entity for M&E-activities within the REFS. Normally, REPMEU will write the TOR for an M&E activity and contract the consultants. In the case of M&E activities initiated by foreign donors and multilateral development banks, REPMEU is responsible for facilitating required local assistance to the M&E-tram contracted by these.

The *RE-Database* developed and maintained by REPMEU is of key importance for the monitoring work. It stores quantitative information from REF-grant application forms (feasibility study: number of households in community, economic activities, number of household/business owned generators) and from REF-grant disbursement forms (project completion form: number of connected households, type of productive uses and estimated productive loads, number of poles and transformers and cost data). It also stores quantitative and synthesizes qualitative data from M&E-reports.

Due to the self-interest of the REFS in the justification of public support to RE-projects, the M&E of the impact of RE on rural transformation is entrusted to an outside institution, which reports directly to the Ministers of MIME and MEF whenever a report of major relevance has been prepared.

REPMEU will in close consultation with the contracted consultant for the capacity building component develop efficient *M&E procedures for REF supported capacity building activities*. One standard procedure is that participants at training courses are requested to fill out a questionnaire at the end of the seminar on the quality and relevancy of received training.

### 8.3 Plan for presentation of M&E-reports

| Type of Report                      | Comments  |
|-------------------------------------|---|
| <u>REFS</u>                         |   |
| - Quarterly progress                | Short standard format report with quantitative data on outputs + short observations on items calling for attention  |
| - Annual RE- and REF Status Report  | Quantitative data on RE + REF-outputs + self-evaluation by REFS on effectiveness of procedures, programs and subsidy levels + synthesis of conclusions of evaluation reports prepared by outside consultant |
| - Mid-term review                   | Evaluation by outside consultant contracted by donors   |
| - End-of-term report                | Quantitative data + self-evaluation + attached evaluation report prepared by donor-contracted consultant  |
| <u>Outsourced TA-activities:</u>    |   |
| - Quarterly progress                | Short standard format report with quantitative data on outputs + short observations on items calling for attention  |
| - Annual status report              | Quantitative data + conclusions from self-evaluation  |
| - Mid-term review                   | Evaluation by outside consultant contracted by REFS   |
| - End-of-project report             | Quantitative data + self-evaluation + attached evaluation report prepared by REFS-contracted consultant   |
| <u>Socio-Economic Impact of REF</u> | Responsibility for M&E permanently outsourced to outside institution  |
| <u>Ad-hoc M&amp;E Reports</u>       | Evaluation reports requested by donors and executed by donor-contracted consultants or by consultants contracted by REFS on behalf of donor   |

### 8.4 M&E of REF Performance

#### 8.4.1 Output Indicators

##### 1. Rural Grid Electrification Status

(national progress divided into grid extension projects by EdC and electricity supply projects by REF)

- The number of communities and agglomerations in Cambodia that have been electrified during the year; new households getting electricity service; percentage and number of communities by category of size that remain without electricity service
- Progress in rural electrification coverage (percentage of rural population living in electrified areas) and rural connection rate (percentage of rural households having electricity service).
- The number of rural enterprises (including those in the broadly define agriculture sector) that have been connected during the year and their estimated load

- The number of health clinics and schools that have been electrified during the year and the percentage and number of national clinics that remain without electricity service

### *2. Sales of solar home systems*

Annual sales of solar PV systems for isolated households and institutions (national progress divided into REF-supported projects and projects supported by other sources)

### *3. Promotion of grid-connected generators using renewable energy*

- Number of micro-hydro plants, total installed capacity and annual generation of electricity
- Number of mini-hydro plants, total installed capacity and annual generation of electricity
- Number of biomass-fueled power plants, total installed capacity and annual generation of electricity

## **8.4.2 Impact Indicators**

### *1. Socio-economic impacts*

In-depth analysis of a few RE-projects, covering a representative spectrum of RE-projects, will be undertaken to evaluate the impact which electrification has on rural transformation. The M&E of rural transformation is of particular importance, as the socio-economic results must justify the substantial support from scarce public resources, which is given to RE, and which competes with alternative claims on these resources for other sector interventions. The subject covers three major issues:

1. *Productive use impact.* The impact of electricity (i) on the improvement and quality of *social services* – health, education, public administration – (ii) on *commercial business activities* - the creation of new agro-industrial businesses and services, development of productivity and quality enhancement in existing agro-industrial businesses and services- and (iii) links to *other infrastructure investments* such as water, road and telecommunications.
2. *Impact on household welfare.* Benefits from improved lighting and better access to radio and, above all, TV.
3. *Poverty impact of supported RE-projects.* Connection rates of poor households; poverty impacts from indirect access to electricity..
4. *The equity impact* of REF subsidies (socio-economic class and regional)

Indicators for the above are collected using a methodology containing participatory and survey elements.

### *2. Impacts on costs of rural electrification and on rural tariffs and quality of service*

- Evolution in *the costs of rural electrification over time, adjusted for differences in customer density and other cost-affecting factors*
- Evolution in *rural tariffs over time, adjusted for differences in customer density and other cost-affecting factors*
- average number of hours per day in which electricity is supplied to households by the REEs

### 8.4.3 Indicators for efficiency of individual instruments

#### *M&E of the effectiveness of REF-investment subsidies*

The M&E relates to the effectiveness (i) of REF subsidy levels and (ii) of the procedures for allocating subsidies to projects. Key performance indicators to be monitored and evaluated would be:

- The annual balance between the supply of grant funds (forecast payments for the year) and the demand for funds (accumulated grant finance requested by applicants)
- The impact of REF investment subsidies on reducing the cost of investment for project developers (subsidy in percent of the cost of investment).
- The importance of RE-investment subsidies for facilitating financial closure of projects
- Whether other instruments for investment support, such as guarantee schemes for loans, for example, would be a cost effective mean to enhance the impact of RE investment subsidies on the acceleration of RE.
- The extent of free-rider effects (giving subsidies to projects, which would have been carried out also in the absence of a subsidy; or offering lower tariffs to consumers who would have been willing to pay a higher tariff).
- The evolution over time in the cost of subsidy per connected customer
- Extent of “perverse” (investment distorting) incentives of procedures used for the processing of applications and for the form for payment of awarded subsidies

#### *M&E of the effectiveness of RE-support programs*

Key output indicators are:

- Number of feasibility studies/business plans prepared with REF-financed TA
- Number of technicians in RE-construction and/or operation trained in REF-financed courses number of trained rural and renewable electricity employees in different institutions (at least 200).
- Number of solar energy technicians trained in REF-financed courses
- Number of bank staff trained in appraisal of RE- and renewable energy projects

Key impact indicators are:

- Evolution in the quality of feasibility studies, which are attached to the applications for REF investment subsidies.
- Evolution in the penetration of least cost technologies and quality of construction work
- Evolution in the unit price of components and of services
- Evolution in the quality of business plans presented by project developers to banks for loan finance for RE and RET projects
- Evolution in the percentage of timely repayment of loans by REEs to financial institutions;
- Evolution in the quality of project appraisal by financial intermediaries, inter alia witnessed in repayments of loans Evolution in the regional generation of project proposals for REF funding
- Evolution in the number of firms that provide goods and services to RE and their regional distribution

#### 8.4.4 Indicators for result achievement

##### Key performance indicators for progress in rural electrification:

- The number of communities and agglomerations in Cambodia that have been electrified during the year and the percentage and number of communities and agglomerations by category of size that remain without electricity service
- Progress in rural electrification coverage (percentage of rural population living in electrified areas) and rural connection rate (percentage of rural households having electricity service).
- The number of rural enterprises (including those in the broadly define agriculture sector) that have been connected during the year and their estimated load
- The number of health clinics and schools that have been electrified during the year and the percentage and number of clinics that are without electricity service
- Progress in solar PV market development for isolated households and institutions (number and capacity of systems installed for households and institutions; information to be provided through REF technical unit)

##### Key performance indicators for effectiveness of REF-investment subsidies:

- access of project developers to loan finance for RE and RET projects
- reduction in average tariff due to the subsidy
- household connection rates in project areas

##### Key performance indicators for effectiveness of REF-TA:

- regional generation of project proposals for REF funding
- quality of project appraisal by financial intermediaries, inter alia witnessed in repayments of loans
- number of firms that provide goods and services to RE and their regional distribution
- quality of feasibility studies/business plans that are attached to the applications for REF investment subsidies.
- penetration of least cost technologies and quality of construction work
- unit price of components and of services

##### Indicators for rural transformation will cover:

- *Productive use impact.* The impact of electricity (i) on the improvement and quality of social services – health, education, public administration – (ii) on commercial business activities - the creation of new agro-industrial businesses and services, development of productivity and quality enhancement in existing agro-industrial businesses and services- and (iii) links to other infrastructure investments such as water, road and telecommunications.
- *Impact on household welfare.* Benefits from improved lighting and better access to radio and, above all, TV.
- *Poverty impact* of supported RE-projects. Connection rates of poor households; poverty impacts from indirect access to electricity.

## Chapter 9

### Environment and Social Screening and Management Plans

#### 9.1 World Bank Safeguard Policies

REF projects and programs funded with IDA and GEF resources need to satisfy the World Bank's safeguard policies, in addition to conformity with environmental legislation of RGC. World Bank policies and guidelines pertaining to environmental safeguards that may require consideration are:

- OP/BP/GP 4.01 Environmental Assessment
- OP/BP/GP 4.36 Forestry
- OP/BP/GP 4.04 Natural Habitats
- OP 4.07 Water Resource Management
- OP 4.30 Involuntary Resettlement
- OP/BP 4.37 Safety of Dams
- OP 4.09 Pest Management

OD 4.01 requires the REF, as project implementing institution, to undertake the functions of *project screening, EA review and implementation of mitigation and monitoring plans.*

#### 9.2 Potential Environmental Issues

The key environmental issue for solar home systems concerns the disposal and recycling of lead acid or nickel-cadmium batteries.

The micro- and mini hydro projects are likely to be run-of-the river as opposed to storage projects. Potential impacts concern: (i) partial dewatering of a section of the riverbed from the intake until water is returned to the river downstream of the powerhouse and consequent impacts on aquatic life in the dewatered section; (ii) potential soil erosion caused by flushing flows discharged from sedimentation basins and by overflows at the forebays; (iii) potential ground instability caused by canal/pipe construction, (iv) cutting of trees for use of power poles for village hydro projects; and (v) adverse impacts due to construction of access roads.

Rapid expansion of thermal power plants may result in accelerating deforestation when based on tree-cutting only for fuel supply.

The first two environmental assessments of mini hydropower and biomass projects (including the first dendro thermal project) will be submitted to IDA for review and clearance prior to disbursements for associated investments. In addition, the environmental assessments for any project that involves involuntary resettlement of more than 20 families, land acquisition, mini hydro projects and biomass energy projects greater than 5 MW will be reviewed and cleared by IDA prior to disbursement from the Credit line.

The environmental assessment should cover physical-chemical, biological, socio-economic and cultural assessment that are likely to arise during construction and operation activities as appropriate.

The REFS-officer responsible for the subsidy award approval and disbursement approvals for a project will:

1. *Project evaluation and approval:*
  - Screen proposal to categorize project according to type of environmental review that will be necessary
  - Check that feasibility study undertook the Environmental Review, Limited Environmental Assessment, or a Full Environmental Assessment, which is appropriate for the category and identifies impacts and designs appropriate mitigation measures
  - Check that feasibility study verifies that the project is consistent with regional land use plans
  - Once project has been screened and any necessary environmental review or assessment has been completed, project can be approved if it meets environmental viability criteria
  - Approval may be denied if the environmental assessment recommendations have not been satisfactorily incorporated into project design.
  
2. *Investment implementation/supervision* of projects involving ethnic minorities and/or requiring full EIA:
  - Undertake site visits to ensure that environmental criteria and mitigation measures, as required by contracts, have been incorporated into project design
  - Require changes to project design if unforeseen impacts occur
  - Meet with contractors and community representatives to gather feedbacks
  - Approval required to issue final payment for project construction

### 9.3 Ethnic minority issues

As a prerequisite to IDA support, REF-supported activities must meet the requirements of Operational Directive 4.20 (Indigenous Peoples). This policy directive requires that special planning measures be established to protect the interests of ethnic minorities, i.e. social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process.

The largest ethnic minority groups in Cambodia include people of Vietnamese and Chinese descent, Muslim Chams, and ethnic Lao. OD 4.20 applies with reference to Cambodian “Highland Peoples”, because these groups maintain cultural and socioeconomic practices different than those practiced by the Khmer national majority.

Consultations with and participation of indigenous people/ethnic minorities, their leaders and local government officials will be an integral part of the overall *Indigenous People Development Plan (IPDP)*, which will be included in the project feasibility report. Project areas which have indigenous people/ethnic minority communities and are candidates for REF support will be visited (at the time of first consultation with communes) by developers, relevant local authorities, and consultants. The IPDPs consist of the following sections:

- (a) preliminary screening
- (b) social assessment
- (c) mitigation measures
- (d) development assistance
- (e) monitoring



#### 9.4 Resettlement Policy Framework<sup>1</sup>

The Government's Inter-ministerial Resettlement Committee (IRC) is charged with determining entitlements, valuation of affected assets and in fixing of compensation rates.

REF-supported projects involving cases of involuntary resettlement must comply with the policy framework on resettlement outlined in Annex D. It conforms to the objectives and principles of the World Bank's Operational Policy 4.12 on *Involuntary Resettlement*.

Current legal provisions in Cambodia governing land acquisition, compensation and resettlement may not meet the objectives and principles of O.P. 4.12. In the case of any inconsistency between the provisions of the Cambodian legal framework and this policy framework, the REFB in consultation with relevant ministries in Cambodia and World Bank staff will decide whether adjustments can be made to local procedures without breaking Cambodian law.

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<sup>1</sup> Refer to Annex Section D: Resettlement Policy Framework” for details.

## Chapter 10

### REF's Environmental Screening Procedures

#### 10.1 Screening Procedures

Five types of subprojects will be considered for financing under the REF: (a) new household connected (diesel generation), (b) REE grid extension, (c) Electricity supply project connected to grid or neighboring countries, (b) mini-hydro (0.75-5.0 MW), (c) micro-hydro (average 50kW), (d) solar photovoltaic home systems and (e) possibly other types of renewable (e.g. biomass etc.). The Ministry of Environment *does* have EA regulations for some of these projects. Specifically, under current environmental law of the Kingdom of Cambodia, diesel projects greater than or equal to 5MW and hydro projects greater than or equal to 1 MW. Subproject shall be proposed by a developer who may be a local community, private sector interest etc. The project proposal will be reviewed by both the REF and the Electricity Authority of Cambodia.

##### Screening

- If the proposed projects is diesel and  $\geq$  5.0 MW, or is a hydro and  $\geq$  1.0 MW the REF will require the developer to send the proposal to the Ministry of Environment for a decision regarding the type of EIA documentation required. Otherwise, the REF will make that decision directly. There are three possibilities depending on the type of project and capacity:
  - I. EMP (World Bank) required
  - II. No EIA or EMP required
- The EA procedures to be followed are presented below.
- If a project proposal needs a Ministry of Environment decision, and the decision reached is that EIA/IEE is required, the developer must prepare both an EIA/IEE for the Ministry of Environment *and* an EMP for the World Bank.
- If a project proposal does not need a Ministry of Environment decision or the decision is reached by the Ministry of Environment that no EIA/IEE is required, the REF will further review the proposal to determine if an EMP is necessary to meet World Bank requests, based upon the Environmental Screening Criteria presented below. If a positive decision is reached by the REF, the developer must then prepare an EMP.

##### Environment Screening Criteria

Will the project take place on a new or existing site?

Will the impact on land/water affect the income or lifestyle of any local people?

Will the impact on air/land/water affect the local environment?

Are there any impacts that affect a large region and/or are long duration (months or years)?

Will there be a potential impact to the health of local people?

##### EA Documentation

For Case I, the developer will be required to prepare two documents; an EIA-Cambodia style, and EMP-World Bank style. The REF will provide detailed technical guidance as necessary to the developer in preparing the EMP. Generic examples of the EMP are presented in Annex B. It is critical that both documents be consistent with each other.

They must both identify the same priority issues, include the same mitigation actions and monitoring requirements etc.

For Case II, the developer will prepare an EMP-World Bank style. For this, he may use the generic EMP previously cited, but will also include or remove issues as appropriate based upon his/her personal knowledge of the project situation and any issues identified during the public consultation (discussed below). As with Case I, the REF will provide detailed technical guidance as necessary to the developer in preparing the EMP.

#### Public Consultation

The developer will be responsible for performing the public consultation. The consultation should be carefully documented as to how the public was notified about the consultation (e.g. newspaper, radio etc.) as to when and where the consultation took place, the names and affiliations of all participants, and summary minutes of the meeting. If any appropriate issues were identified, they should be incorporated in the EMP, and the consultation documentation should reflect how the issue will be addressed, who will be responsible and the schedule to which it will be resolved.

#### Review and Approval

For Case I, the Ministry of Environment will be responsible for approving the EIA/IEE, and the REF will be responsible for approving the EMP. No project will receive further consideration from the REF until written demonstration of the Ministry of Environment approval is presented.

For Case II, the REF will review and approve the EMP.

#### Disclosure

For Case I, the REF will send to the World Bank an English language version of the EIA which was officially approved by the Ministry of Environment, and an English language version of the EMP for disclosure in the World Bank Infoshop. The developer will be responsible to disclose a Cambodian language version of the EIA and EMP at a convenient public location near the project area.

For Case II, the developer will be responsible to disclose the Cambodian language version of the EMP at a convenient public location near the project area.

#### Implementation

The project developer will check bidding documents to insure that all mitigating measures identified are included. He will also provide a written statement to the REF verifying that all items identified in the EMP have been included in the bidding documents.

REF will perform environmental monitoring of all proposed project EMPs and prepare regular reports of its findings.

REF will include a section on environment in their progress reports to the World Bank. One item in this section will include a summary of the monitoring results and any actions taken.

## Chapter 11 Technical Specifications

### Micro/Mini Hydro

For the Rural Electrification Fund sub project, an average size of micro hydro is around 50 kW and mini hydro 0.75 to 5 MW. The technologies for mini-hydro and micro hydro have already been proven in other countries in the region. Identification of low-cost designs and procedures for electrification of off grid loads and the pilot project would be addressed during implementation (lessons learned) over time. In the meantime, it is required that a pre-feasibility – followed by feasibility – studies are compulsory steps for rational development of micro/mini hydro. The main steps are summarized below:

1. *Water availability*, its flow rates all year round, particularly during the dry and raining seasons. Elements such as catchments areas, land and water managements are important;
2. *Demand side* (number of households and possible cottage industry) near the site, if possible of less than 5 km from the power house for micro or "village" hydro, with types of loads in the evening, day and night;
3. For design, it is essential to have the following information:
  - Topography for site selection and location of power house, which is site specific. This is a very important element in the Cambodian environment due to significant different in water levels between the dry and raining seasons;
  - Hydrological characteristics, and
  - Geotechnical characteristics of the site

Other considerations include operations and maintenance, financial analysis, management plan, and where appropriate, the developer must conduct social, environmental and economic impact assessments, civil engineering works, electrical & mechanical equipment, distribution lines, etc.

**NOTE:** For more details, as an interim measure, REF can authorize the use of the specifications & general requirements of the World Bank's similar projects in the region.

### Solar Home System (SHS)

The Technical Standards comprise 3 basic sets of information:

1. **Hardware** (*its main components, such as Photo-Voltaic Module installation, Circuit Protection & Charges Controls, System Monitoring, Batteries, Equipment Enclosure, Wiring and Documentation, Maintenance*)

It is intended to provide the user with a convenient mean of supplying power for small electrical loads, such as lights, radio/cassettes players or TV. A typical SHS operates at a rated voltage of 12 Vdc;

It should be designed to have at least three days autonomy;

The SHS is packaged to provide convenient installation at a remote customer site by a qualified technician. The system is constructed such that a user can perform

routine maintenance. Routine maintenance such as adding battery water, replacing light bulbs and fuses, and diagnostics or replace components.

## **2. Certification requirements**

2.1 Products to be financed by the IDA and Global Environment Facility (GEF) under the Rural Electrification Fund Project must have a type-test certificate from an accredited testing and certification organization, usually from the manufacturers of such products. . For local products, a certification from a reputable institution is acceptable on an independent engineering firm; where a reputable firm/independent engineering firm is not available, the certification shall be issued by the Ministry of Industry, Mines, and Energy.

2.2 The supplier provides the most appropriate system integration, components, assembly and packaging that meet all the component specifications in Annex 1.

## **3. Recommended Practices**

Recommended practices shall include adequate level of safety, performance, reliability, and system lifetime.

**NOTE:** *As an interim measure, REF can authorize the use of the SHS specifications of the World Bank's similar projects in the region.*

**ANNEX A: APPLICATION SET**

**Annex A-1: Sample of the Application Form for  
Grant/Subsidy from REF**

For Individual:

I am, ..... resident at, ..... Identification Card (or passport) No. ....

For Company:

Company Name: .....

Letter No.: .....

**To:**

**Executive Director of Rural Electrification Fund Secretariat (REFS)**

**Subject:** Request for consideration for a Grant/Subsidy to ..... (Name of the applicant).

With reference to above subject, I/we have the honor to request your consideration of a grant/subsidy for providing new connections from diesel generation, to ..... (Name of the applicant either an individual or company to whom the grant/ subsidy is to be provided).

I/we am/are at present providing the electricity services under the license issued by EAC /proposing to provide electricity services for which application has been submitted for issue of license by EAC.

The information sheet with annexes is attached with the application:

Please accept the assurances of our highest consideration.

Yours Faithfully

No .....

Date .....

(Name of the signatory)

Name and full address of the applicant

**Annex A-2:**  
**Information sheet to be furnished with**  
**Application for investment grant for new connections**  
**From new diesel power plants**

|  |
|--|
| <b>Part 1 – Application</b>  |
| <b>a. For Individual Applicant</b> <ul style="list-style-type: none"> <li>- Name:</li> <li>- Address:</li> <li>- Phone Number:</li> <li>- Fax Number:</li> <li>- Copy of identification card or other certification to be enclosed as Annex 6.</li> </ul>  |
| <b>b. For Company Applicant</b> <ul style="list-style-type: none"> <li>- Name of the Company:</li> <li>- Address of the Company:</li> <li>- Phone Number:</li> <li>- Fax Number:</li> <li>- Name of Director and Manager of the Company:</li> <li>- Address of Director and Manager of the Company:</li> <li>- Copy of the certificate of registration under the Commercial Law of Kingdom of Cambodia (if not yet registered, copy of the active application) to be enclosed as Annex 6.</li> </ul> |
| <b>Applicant’s Bank name:</b><br><b>Applicant’s account number:</b><br><b>Bank Address:</b>  |
| <b>Name of co-financing Bank:</b><br><b>co-financing Bank Address:</b>   |
| <b>Business Form for Investing Equity</b><br><br>Individual:<br>Company registered under commercial law:<br>Community cooperative:   |
| <b>Project Location:</b> <ul style="list-style-type: none"> <li>- Village:</li> <li>- Commune:</li> <li>- District:</li> <li>- Province:</li> </ul> <p>* Site with GIS if available.</p>   |
| <b>Project finance:</b> <ul style="list-style-type: none"> <li>- Equity from Investor</li> <li>- Loan (amount, maturity, interest rate)*</li> <li>- Requested grant from REF</li> <li>- Grant from other sources</li> </ul>  |

|  |  |
|--|--|
| <p>TOTAL:</p> <p>Note: * proof of commercial bank debt financing, including letter of intent from the Bank, copies of draft loan Agreement and the bank's project appraisal document, attached as Annex 5.</p>   |  |
| <p><b>Name of Equity Investors/Ownership percentage</b></p>  |  |
| <p><b>Name</b></p>   | <p><b>Ownership %</b></p>  |
| <p><b>Project Description:</b><br/>(provide brief summary of project)</p>  |  |
| <p><b>Compliance with regulatory conditions</b></p> <p>- Application for Local Planning Approval submitted Yes: No:</p> <p>- Is an environmental assessment required Yes: No:<br/>(if YES, attach approval from relevant authority)</p> <p>- Application for not less than 5 years term license submitted Yes: No:</p>   | <p>Attached as Annex 2<br/>Attached as Annex 3</p> <p>Attached as Annex 4</p>  |
| <p><b>Compliance with technical conditions</b></p> <p>- The installation is in compliance with technical standards issued by MIME</p> <p>- REF least cost design principles (within technical standards as mentioned above) have been applied</p> <p>- If there are deviations from technical standards and least cost design principles, please justify</p>   | <p>Included in feasibility study (attached Annex 1) and to be confirmed by consultant contracted by REFS to review the feasibility study</p> |
| <p><b>Key Project Data (for new installations)</b></p> <p>1. Total generator capacity kW</p> <p>2. Normal Operating capacity kW</p> <p>3. Expected annual generation kWh/year</p> <p>4. Peak load kW</p> <p>5. Length of MV distribution line km</p> <p>6. Length of LV distribution line km</p> <p>7. Number of transformer Unit</p> <p>8. Capacity of transformer kW</p> <p>9. Number of households (HH) in operating region HH</p> <p>10. Number of HH connections HH</p> |  |



| <b>Demand Profile - 5 to 10 Years</b> (kWh/year)       | Year |   |   |   |   |   |   |   |   |    |
|--|------|---|---|---|---|---|---|---|---|----|
|  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. Electricity sales to households                     |      |   |   |   |   |   |   |   |   |    |
| 2. Electricity sales to industrial and commercial uses |      |   |   |   |   |   |   |   |   |    |
| 3. Electricity sales to public institutions            |      |   |   |   |   |   |   |   |   |    |
| 4. Total Electricity sales                             |      |   |   |   |   |   |   |   |   |    |

| <b>Investment Cost Estimated</b> | <b>USD</b> |
|----------------------------------|------------|
| 1. Cost of generation plant      |            |
| 2. Cost of MV line               |            |
| 3. Cost of LV line               |            |
| 4. Cost of Transformer           |            |
| 5. Cost of Meter                 |            |
| 6. Cost of connection            |            |
| 7. Other cost                    |            |
| <b>Total Investment Cost:</b>    |            |

| <b>Key Ranking Indicators</b>   | <b>USD</b> |
|---|------------|
| 1. Estimated total investment cost per kW of installed capacity                 |            |
| 2. Estimated production cost per kWh for 5 - 10-Year period (12% discount rate) |            |

|   |  |
|---|--|
| <b>Financial viability of the project over a min 5 to 10-years period</b> |  |
| 1. Sales forecast (kWh & USD)   | Included in feasibility study (Annex 1) and to be confirmed by consultant contracted by REFS to review the feasibility study |
| 2. Operational cost breakdown   |  |
| 3. Profitability calculations   |  |
| 4. Cash flow projection   |  |
| 5. <b>IRR (%)</b>   |  |
| <b>Calculation of subsidy grant</b>                                       | <b>Investment grant</b>  |
| 45 USD/new connection x No. of new connections                            | <b>USD</b>   |

| <b>PART 2 – SUPPORTING ANNEXES</b> |   |
|------------------------------------|---|
| Annex 1                            | Copy of feasibility study   |
| Annex 2                            | Documentation that all required local planning approvals have been obtained   |
| Annex 3                            | Environmental assessment report, if required  |
| Annex 4                            | Long Term license application to EAC  |
| Annex 5                            | Proof that the commercial bank for providing the debt finance for the project has agreed to finance the project and finalized its due diligence assessment , including copies of the drafts loan agreement and the bank projects appraisal document |
| Annex 6                            | Copy of registration/application for forming the Company or copy of identification card.  |

Date: .....

Applicant's Signature and Name

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**Part 3 – APPROVAL AND TRANSFER ORDER (APP2)**

Conditions for receiving investment grant have been confirmed and found in order.

A project investment grant of .....is approved to be allocated for the project in accordance with the guidelines for grant disbursement.

Adopted Budget Year .....  
 Budget Amendment Date .....  
 Budget Line Item or category .....

**Approved by Executive Director**

Signature of Executive Director.....  
 Date .....

**If over USD 20,000.- Board Approval is required**

Date of Board Approval .....

Signature of Chairman of the Board .....  
 Date .....

**Annex A-3:**  
**Information sheet to be furnished with**  
**Application for investment grant for new connections**  
**From existing licensee having diesel generation**

|  |
|--|
| <b>Part 1 – Application</b>  |
| <b>a. For Individual Applicant</b> <ul style="list-style-type: none"> <li>- Name:</li> <li>- Address:</li> <li>- Phone Number:</li> <li>- Fax Number:</li> <li>- Copy of identification card or other certification to be enclosed as Annex 6.</li> </ul>  |
| <b>b. For Company Applicant</b> <ul style="list-style-type: none"> <li>- Name of the Company:</li> <li>- Address of the Company:</li> <li>- Phone Number:</li> <li>- Fax Number:</li> <li>- Name of Director and Manager of the Company:</li> <li>- Address of Director and Manager of the Company:</li> <li>- Copy of the certificate of registration under the Commercial Law of Kingdom of Cambodia to be enclosed as Annex 6.</li> </ul> |
| <b>Applicant’s Bank name:</b><br><b>Applicant’s account number:</b><br><b>Bank Address:</b>  |
| <b>Name of co-financing Bank:</b><br><b>co-financing Bank Address:</b>   |
| <b>Business Form for Investing Equity</b><br><br>Individual:<br>Company registered under commercial law:<br>Community cooperative:   |
| <b>Project Location:</b> <ul style="list-style-type: none"> <li>- Village:</li> <li>- Commune:</li> <li>- District:</li> <li>- Province:</li> </ul> <p style="margin-left: 20px;">* Site with GIS if available.</p>  |
| <b>Project finance:</b> <ul style="list-style-type: none"> <li>- Equity from Investor</li> <li>- Loan (amount, maturity, interest rate)*</li> <li>- Requested grant from REF</li> <li>- Grant from other sources</li> </ul>  |

|   |   |
|---|---|
| TOTAL:  |   |
| Note: * proof of commercial bank debt financing, including letter of intent from the Bank, copies of draft loan Agreement and the bank's project appraisal document, attached as Annex 5.   |   |
| <b>Name of Equity Investors/Ownership percentage</b>  |   |
| <b>Name</b>   | <b>Ownership %</b>  |
| <b>Project Description:</b><br>(provide brief summary of project)   |   |
| <b>Compliance with regulatory conditions</b><br><br>- Application for Local Planning Approval submitted Yes: No:<br><br>- Is an environmental assessment required Yes: No:<br>(if YES, attach approval from relevant authority)<br><br>- Copy of license issued by EAC for not less than 5 years term submitted Yes: No:                              | Attached as Annex 2<br>Attached as Annex 3<br><br><br>Attached as Annex 4   |
| <b>Compliance with technical conditions</b><br><br>- The installation is in compliance with technical standards issued by MIME<br><br>- REF least cost design principles (within technical standards as mentioned above) have been applied<br><br>- If there are deviations from technical standards and least cost design principles, please justify | Included in feasibility study (attached Annex 1) and to be confirmed by consultant contracted by REFS to review the feasibility study |

| <b>KEY PROJECT DATA</b> |  |          |          |               |       |
|-------------------------|--|----------|----------|---------------|-------|
| No                      | Description  | Unit     | Existing | Extension/new | Total |
| 1                       | Total generation capacity                              | kW       |          |               |       |
| 2                       | Normal operating capacity                              | kW       |          |               |       |
| 3                       | Expected annual generation                             | kWh/year |          |               |       |
| 4                       | Peak load  | kW       |          |               |       |
| 5                       | Length of MV Distribution line                         | km       |          |               |       |
| 6                       | Length of LV distribution line                         | km       |          |               |       |
| 7                       | Number of transformer                                  | Unit     |          |               |       |
| 8                       | Capacity of transformer                                | kW       |          |               |       |
| 9                       | Number of households (HH) in operating region          | HH       |          |               |       |
| 10                      | Number of HH connections (name, serial number of meter | HH       |          |               |       |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  | for existing consumer should be given in Annex 7). |  |  |  |  |
|--|--|--|--|--|--|

| Demand Profile – 5 to 10 Years, (kWh/year)  | Year     |                |          |                |          |                |          |                |          |                |
|---|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|
|   | Yr 1     |                | Yr 2     |                | Yr 3     |                | Yr 4     |                | Yr 5     |                |
|   | Existing | Extension part | Existing | Extension part | Existing | Extension part | Existing | Extension part | Existing | Extension part |
| 1. Electricity sales to households<br>2. Electricity sales to industrial and commercial uses<br>3. Electricity sales to public institutions<br>4. Total Electricity sales |          |                |          |                |          |                |          |                |          |                |

| Demand Profile - 5 to 10 Years, (kWh/year)  | Year     |                |          |                |          |                |          |                |          |                |
|---|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|
|   | Yr 6     |                | Yr 7     |                | Yr 8     |                | Yr 9     |                | Yr 10    |                |
|   | Existing | Extension part | Existing | Extension part | Existing | Extension part | Existing | Extension part | Existing | Extension part |
| 1. Electricity sales to households<br>2. Electricity sales to industrial and commercial uses<br>3. Electricity sales to public institutions<br>4. Total Electricity sales |          |                |          |                |          |                |          |                |          |                |

|  |            |
|--|------------|
| <b>Investment Cost Estimated</b><br><br>1. Cost of generation plant<br>2. Cost of MV line<br>3. Cost of LV line<br>4. Cost of transformer<br>5. Cost of Meter<br>6. Cost of connection<br>7. Other cost<br><br><b>Total Investment Cost:</b> | <b>USD</b> |
|--|------------|

|   |            |
|---|------------|
| <b>Key Ranking Indicators</b><br><br>1. Estimated total investment cost per kW of installed capacity<br>2. Estimated production cost per kWh for 5-10-Year period (12% discount rate) | <b>USD</b> |
|---|------------|

|   |   |
|---|---|
| <p><b>Financial viability of the project over a 10-year period</b></p> <p>1. Sales forecast (kWh &amp; USD)<br/>                 2. Operational cost breakdown<br/>                 3. Profitability calculations<br/>                 4. Cash flow projection<br/>                 5. <b>IRR (%)</b></p> | <p>Included in feasibility study (Annex 1) and to be confirmed by consultant contracted by REFS to review the feasibility study</p> |
|---|---|

|  |  |
|--|--|
| <p><b>Calculation of subsidy grant</b></p> <p>45 USD/new connection x No. of new connections</p> | <p><b>Investment grant<br/>USD</b></p> |
|--|--|

| <p><b>PART 2 – SUPPORTING ANNEXES</b></p> |  |
|---|--|
| <p>Annex 1</p>                            | <p>Copy of feasibility study</p>   |
| <p>Annex 2</p>                            | <p>Documentation that all required local planning approvals have been obtained</p>   |
| <p>Annex 3</p>                            | <p>Environmental assessment report, if required</p>  |
| <p>Annex 4</p>                            | <p>Long Term license application to EAC</p>  |
| <p>Annex 5</p>                            | <p>Proof that the commercial bank for providing the debt finance for the project has agreed to finance the project and finalized its due diligence assessment , including copies of the drafts loan agreement and the bank projects appraisal document</p> |
| <p>Annex 6</p>                            | <p>Copy of registration for forming the Company or identification card.</p>  |
| <p>Annex 7</p>                            | <p>Name, serial number of meter for existing consumers.</p>  |

Date: .....

Applicant’s Signature and Name

**FOR REF USE ONLY**

**Part 3 – APPROVAL AND TRANSFER ORDER (APP2)**

Conditions for receiving investment grant have been confirmed and found in order.

A project investment grant of .....is approved to be allocated for the project in accordance with the guidelines for grant disbursement.

Adopted Budget Year .....  
 Budget Amendment Date .....  
 Budget Line Item or category .....

**Approved by Executive Director**

Signature of Executive Director.....  
 Date .....

**If over USD 20,000.- Board Approval is required**

Date of Board Approval .....

Signature of Chairman of the Board .....  
 Date .....

## ANNEX B: GUIDELINES FOR ENVIRONMENTAL MANAGEMENT

### Generic Environmental Management Plan New Household Connected (diesel)

#### Mitigation Plan

| Environmental Issue | Mitigation Measure  | Implementation Responsibility                               |
|---------------------|---|---|
| <b>Construct</b>    |   |   |
| Noise               | Limit construction activities to daytime hours. If necessary, nighttime construction, but local population must be informed   | Contractor*   |
| Dust                | Water sprinkle site during hot, dry and or windy weather<br>Set up physical barriers around the construction site   | Contractor*   |
| <b>Operation</b>    |   |   |
| Noise               | Design plan to meet Cambodian or international standards, specify standard in equipment bid document  | Design contractor   |
| Air emission        | Design plant to meet Cambodian standards or World Bank guidelines(whichever is stricter), specify standards in equipment bid document<br>Locate plan downwind and as far away from residential areas as possible<br>Use low sulfur diesel fuels | Design contractor*<br><br>Contractor*<br><br>Power producer |



**Monitoring Plan**

| Monitoring Parameter | Measurement Technique | Monitoring Location                  | Monitoring Frequency                                 | Monitoring Responsibility                                   |
|----------------------|-----------------------|--------------------------------------|--|---|
| <b>Construct</b>     |                       |                                      |  |   |
| Noise                | Observation           | Construction site, residential areas | Peak construction activity or residential complaints | REF working group   |
| Dust                 | Visual                | Construction site                    | Hot, dry windy weather or residential complaints     | REF working group   |
| <b>Operation</b>     |                       |                                      |  |   |
| Noise                | Acoustimeter          | Construction site residential areas  | Twice/year or upon complaints from local residents   | MIME-REF working group (Office of Standards and Efficiency) |
| Air emission         | Exhaust gas analyzer  | Diesel Exhaust                       | Once/year  | MIME-REF Working group (Office of Standards and Efficiency) |

## ANNEX C: ETHNIC MINORITIES DEVELOPMENT STRATEGY FOR REF

### Introduction

As a prerequisite to IDA support, RE&T must meet the requirements of Operational Directive 4.20 (Indigenous Peoples). This policy directive requires that special planning measures be established to protect the interests of ethnic minorities, i.e. social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process.

Indigenous peoples can be identified in particular geographical areas by the presence in varying degrees of the following characteristics:

- (a) a close attachment to ancestral territories and to the natural resources in these areas;
- (b) self-identification and identification by others as members of a distinct cultural group;
- (c) an indigenous language, often different from the national language;
- (d) presence of customary social and political institutions; and
- (e) primarily subsistence-oriented production.

Based on the above characteristics, the largest ethnic minority groups in Cambodia include people of Vietnamese and Chinese descent, Muslim Chams (who are in the subproject areas) and ethnic Lao, all of whom are generally not considered to be “Cambodian Highland People” in the Cambodian context.

The Bank has determined that OD 4.20 applies with reference to Cambodian “Highland Peoples”, because these groups maintain cultural and socioeconomic practices different than those practiced by the Khmer national majority.

In the context of this project, it is important to note that the OD 4.20 refers to social groups and not to individuals. The primary objectives of OD 4.20 are:

- to ensure that such groups are afforded meaningful opportunities to participate in planning that affects them;
- to ensure that opportunities to provide such groups with culturally appropriate benefits are considered; and
- to ensure that any project impacts that adversely affect them are avoided or otherwise minimized and mitigated.

REF-supported subprojects, including mini and micro hydropower plants, solar powers, and REE isolated systems, might benefit some ethnic minorities. This strategy note provides some general principles and procedures that will be applied during project implementation, if indigenous people/ethnic minorities are reported in any of the subprojects. The purpose of the strategy is one of ***ensuring consultation, giving ethnic minorities a voice, and an opportunity to participate in the project.***

### Screening for indigenous people among beneficiary populations

The project design recognizes that ‘meaningful’ participation by poor and disadvantaged sections of society requires special focus that goes beyond routine project implementation management. In the operation manual for REF, detailed guidelines on social assessment and resettlement aspects are included. Under these guidelines, the developer of each subproject will carry out preliminary social assessment during the preparation of project feasibility report, which will be

prepared by experienced consulting team to be funded under the project TA. Such effort is designed to understand the basic social economic needs of the communities and support key activities aimed at empowering beneficiary populations to exercise their voices and choices.

The project is, therefore, committed and has the organizational instruments to ensure that ethnic minorities are (i) consulted in matter relating to each subproject, (ii) provided opportunities for participation in decision making related to the subproject, and (iii) provided opportunities for participation in project activities should they so desire.

Re-confirming that there are no IPs among beneficiary populations will be undertaken in the social assessment process. By gathering both qualitative and quantitative data in the project areas through a range of PRA techniques, the basic social economic profile of beneficiary population will be developed. Such procedures have already been used in the feasibility studies of some pilot subprojects, which are aimed at ensuring that all minority voices and opinions are heard through the project preparation and implementation process.

### **Principles and procedures applied where the project involves Cambodian Highland People**

REF once it is set up, will ensure that full consultation, in a language spoken by the indigenous people/minority group, and invite participation of indigenous people/ethnic minorities are fully taken into account during preparation and implementation of subprojects, while respecting their current practices, beliefs and cultural preferences. The outcome of the consultations will be documented into the project proposal. (See section 4 for detailed procedures of such consultation efforts.)

If the indigenous people conclude that the project will be beneficial, or non-harmful to their way or life or cultural beliefs, and the adverse impacts are minimal, measures and assistance will be developed in consultation with tribal elders, community groups, and independent assigned NGOs. The community should also be consulted to ensure that their rights and culture are respected. The assistance may also include institutional strengthening and capacity building of tribal elders and community groups working with the project.

### **Reporting, Monitoring and Documentation**

The proposed screening, social assessment and consultation process will provide comprehensive baseline data on social, economic and technical aspects of each subproject. This includes also participatory mapping of community access to power supply and key services. If the social assessment confirms that no ethnic minority populations exist in the project areas, no further action is necessary. If the social assessment indicates that there are potential social issues because of ethnic minority populations in such subproject, it will be ensured that the responsible developer will undertake specific measures to consult with, and give opportunity for ethnic minority populations in participating decision making related to the subproject, should they so desire.

Besides specific attention to ethnic minority issues in supervision and monitoring, the PMU in MIME/REF will include these matters in their progress reporting. The IDA supervision missions will periodically pay special attention to ensure that that the subproject affords benefits to vulnerable groups and ethnic minorities.

### **Consultation Framework for Ethnic Minority Issues under REF**

The consultation framework aims to ensure that indigenous people/ethnic minorities are well informed, consulted and mobilized to participate in the sub-projects to be supported by REF. Their participation can either provide them benefits with more certainty, or protect them from any potential adverse impacts of sub-projects to be financed by the Project. The main features/process of the consultation framework includes a preliminary screening process, then a social impact assessment to determine the degree and nature of impact of each subproject to be supported by REF, and an action plan will be developed if warranted. Consultations with and participation of indigenous people/ethnic minorities, their leaders and local government officials will be an integral part of the overall Indigenous People Development Plan (IPDP), which could be included in the project feasibility report. The IPDPs consist of the following sections:

- (a) preliminary screening
- (b) social assessment
- (c) mitigation measures
- (d) development assistance
- (e) monitoring

The Project will provide a series of training to all implementers and local agencies preparing and implementing IPDPs.

### **Preliminary Screening**

All subproject areas which have indigenous people/ethnic minority communities and are candidates for REF support will be visited (at the time of first consultation with communes) by developers, relevant local authorities, and consultants. Prior to the visit, respective developers will send a letters to the communities informing their leaders that they will be visited by the respective developers and local authorities and consultation will be conducted on the subproject. The letter will request that the communities invite to the meeting representatives of farmers, women associations and village leaders for discussion on the subproject. During the visit, the community leaders and other participants will present their views with regards to the subproject.

At this visit, the social scientists (consultants) will undertake a screening for ethnic minority population with the help of ethnic minority leaders and local authorities. The screening will check for the following:

- (a) names of ethnic groups in the affected village
- (b) total number of ethnic minority groups in the affected villages
- (c) percentage of ethnic minority of village population
- (d) number and percentage of ethnic minority households along the zone of influence of the proposed sub-Project.

If the results show that there are ethnic minority communities in the zone of influence of the proposed subproject, a social impact assessment will be planned for those areas.

### **Social Assessment**

The social assessment (SA) will be undertaken by the social scientists (consultants). The SA will gather relevant information on the following: demographic data; social, cultural and economic situation; and social, cultural and economic impacts - positive and negative.

Information will be gathered from separate group meetings: ethnic minority leaders; ethnic minority men; and ethnic minority women, especially those who live in the zone of influence of the proposed work under sub-Project. Discussions will focus on subproject impacts, positive

and negative; and recommendations for design of subproject. If the SA indicates that the potential impact of the proposed sub-project will be significantly adverse or that the ethnic minority community rejects the project, the sub-Project will not be implemented in that locality; no further action is needed in this case. If the ethnic minority supports the sub-Project implementation an IPDP will be developed.

### **Indigenous People Development Plan**

The IPDP will consist of a number of activities and will include mitigation measures of potentially negative impacts, modification of subproject design, and development assistance. Where there is land acquisition in ethnic minority communities, the project will ensure that their rights will not be violated and that they be compensated for the use of any part of their land in a manner that is culturally acceptable to them. The compensation and rehabilitation will follow the Resettlement Policy Framework of the project. An IPDP will include:

- (1) legal Framework
- (2) baseline data;
- (3) land tenure information;
- (4) local participation;
- (5) technical identification of development or mitigation activities;
- (6) institutional arrangement;
- (7) implementation schedule;
- (8) monitoring and evaluation; and
- (9) cost and financing plan.

### **Implementation Arrangement**

Consultants will also be responsible for training respective developers or local NGOs to undertake the work of consultation, screening, social impact assessment, analyses and preparing IPDPs.

Developers of individual subprojects and local authorities are responsible for implementing IPDP (arrange adequate staff and budget).

### **Monitoring**

Implementation of the IPDPs will be regularly supervised and monitored by MIME/REF. The findings and recommendations will be recorded in quarterly reports and to be furnished to IDA.

The independent agency which would be used by MIME/REF to undertake external monitoring and evaluation of the implementation of resettlement action plans for the REF will also be tasked with monitoring the activities for IPDP. While, the external monitoring agency will visit a sample of affected households for resettlement in each relevant province on an annual basis, it will also visit a sample of at least 10% of ethnic minority households in the project affected areas.

### **Schedule**

The IPDP should have an implementation schedule that is coordinated with the subproject implementation. Logically, social assessments and group meetings should be undertaken before subproject designs are prepared. Compensation for land acquisition should be satisfactorily completed at least one month prior to start of civil work. Monitoring should take place at the recommended times during and after civil work.

### **Budget**

The IPDP will include information on detailed cost of mitigation measures and other rehabilitation entitlements for ethnic minority in the affected areas. Sources of funding for the various activities and financing plans will be clearly specified in the cost tables.

### **Reporting/Documentation**

The IPDPs will be prepared and submitted by individual developers to REF and then the IDA at the same time that respective developers submit their subproject applications to REF and the IDA for review.

## ANNEX D: RESETTLEMENT POLICY FRAMEWORK

While construction of MV and LV requires little land acquisition and resettlement, small land acquisition might be required for the construction of mini hydro and some MV facilities. Following the Bank policy on involuntary resettlement, a resettlement policy framework has been prepared for the RE component. The Resettlement Policy Framework, presented below, addresses adverse social impacts that may result due to involuntary acquisition of assets and changes in land use and includes provision for compensation and rehabilitation assistance.

### 1 Definitions

**Compensation** means payment in cash or in kind for an asset to be acquired or affected by a project at replacement cost.

**Cut-off Date** is the date prior to which the occupation or use of the project area makes residents/users of the project area eligible to be categorized as affected persons. The cut-off date coincides with the date of the census of affected persons within the project area boundaries. Persons not covered in the census, because they were not residing, having assets, or deriving an income from the project area, are not eligible for compensation and other entitlements.

**Eligible landholders** are affected persons who (a) hold title to land; or (b) do not hold title but whose possession of land can be legalized with a title pursuant to the Land Law of Cambodia.

**Entitlement** means a range of measures comprising compensation, income restoration support, transfer assistance, income substitution, and relocation support which are due to affected people, depending on the nature of their losses, to restore their economic and social base.

**Project Authorities** refer to both Electricite du Cambodge (EDC) and Ministry of Industry, Mining, and Energy (MIME), with EDC in charge of grid extension of RE Component, and MIME/REF in charge of off-grid electrification of RE component; EAC is in charge of licensing.

**Project Affected Persons (PAPs)** includes any person or persons, households, a firm, or private or public institution who, in the context of acquisition of assets and change in land usage, as of the cut-off date, on account of the execution of the project, or any of its subcomponents or part, would have their:

- (a) Standard of living adversely affected;
- (b) Right, title, or interest in any house, land (including residential, commercial, agricultural and grazing land) or any other moveable or fixed assets acquired or possessed, in full or in part, permanently or temporarily adversely affected; or
- (c) Business, occupation, places of work or residence or habitat adversely affected, with or without displacement.

PAP includes persons and affected household and consists of all members of a household residing under one roof and operating as a single economic unit, who are adversely affected by a project or any of its components. For resettlement purposes, affected persons will be considered as members of affected households.

**Rehabilitation** means assistance provided to project affected persons seriously affected due to the loss of productive assets, incomes, employment or sources of living, to supplement payment

of compensation for acquired assets, in order to achieve, at a minimum, full restoration of living standards and quality of life.

**Replacement cost.** With regard to land and structures, **replacement cost** is defined as follows: For agricultural land, it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes. For land in urban areas, it is the pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes. For houses and other structures, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors' fees, plus the cost of any registration and transfer taxes. In determining the replacement cost, depreciation of the asset and the value of salvage materials are not taken into account, nor is the value of benefits to be derived from the project deducted from the valuation of an affected asset.

**Resettlement** means all measures taken to mitigate any and all adverse impacts of a project on PAP property and/or livelihoods, including compensation, relocation (where relevant) and rehabilitation as needed.

**Vulnerable group** are distinct groups of people who might suffer disproportionately or face the risk of being marginalized from the effects of resettlement and specifically include: (i) female headed households with dependents, (ii) disabled household heads, (iii) households falling under the generally accepted indicator for poverty, (iv) elderly households with no means of support and landlessness, and (v) indigenous minorities.

## 2 Cambodian Legal Provisions

The Constitution of Cambodia provides for land acquisition for public purposes. In Article 20 it states that "Nobody shall be forced to transfer his or her ownership, if forcing is necessary in public interest and if no proper and just indemnity has been paid to owner". Regarding compensation, Article 40 of the Constitution states that "...The right to confiscate (land) possession from any person shall be exercised only in the public interest as provided for under law and shall require fair and just compensation."

Some protection for vulnerable groups is also specified in the Constitution in Article 73: "The State shall give full consideration to children and mothers. The State shall establish nurseries, and help support women and children who have inadequate support" and Article 74: "The State shall assist the disabled and the families of combatants who sacrificed their lives for the nation".

The new 2001 Land Law provides that no person shall be "deprived of their ownership unless this action is for the public interest consistent with formalities and procedures provided by laws and regulations, and after just and fair compensation". There are currently no such "laws and regulations" and there continues to be an absence of definition for "just compensation". In addition, a person holding illegally possessed property cannot claim compensation, even if there is a title (Article 19). Further, any "illegal and intentional or deceitful acquisition of the public domain of the State or public legal entity shall be punished" with a fine and/or imprisonment. This penalty can be doubled if the landholder is held to damage or delay work in favor of the common interest, especially the possession of land necessarily reserved for maintaining roads. Under the new Land Law, those who have occupied a right of way or public properties may not



be entitled to any compensation or social support, regardless of their being an affected person or a member of a vulnerable group.

Although individual rights to ownership and compensation are protected by present laws, there are no clearly defined specific provisions or a mechanism for land acquisition by the State through expropriation. The expropriation of immovable properties is based on decisions of government staff and implementation in an ad-hoc manner varying from one project to another.

Traditional private land ownership was abolished during the Khmer Rouge period (1975-1979) and was not re-introduced until the late 1980s. Determining ownership and obtaining documentation to prove ownership is a cumbersome and time consuming process which many landholders have not utilized. The boundaries of public land still remain unclearly defined and it can be difficult to distinguish between public and private land. This blurring between public and private land is particularly acute with regard to rights of ways for roads, irrigation channels and the like. There was no specific law or regulation on rights of way until 1999 when a Government of Cambodia Decree identified a 50-meter right of way for some specified national roads and 60 meters for other national roads. The width of other rights of way varies depending on the type of road. No efforts were made to publicize the claimed rights of way and no physical demarcations have been made for these rights of way.

Presently, the Government's Inter-ministerial Resettlement Committee (IRC) is charged with determining entitlements, valuation of affected assets and in fixing of compensation rates. Current legal provisions governing land acquisition, compensation and resettlement in Cambodia do not meet the objectives and principles of World Bank's Operational Policy (O.P.) 4.12 on *Involuntary Resettlement*.

This policy framework conforms to the objectives and principles of the World Bank's O.P. 4.12. In the case of any inconsistency between the provisions of the Cambodian legal framework and this policy framework, the policy in question shall be discussed and agreed by the RGC prior to implementation.

### **3 Objectives and Principles of the Policy**

#### **3.1 Overall Objectives**

This Policy framework seeks to address the inadequacy of the existing legal provisions discussed in the previous section. This policy is based on the philosophy that the project must serve the needs of society and ensure that PAPs are at least as well off due to the project. This can be ensured through the following basic objectives:

- (i) Avoid involuntary resettlement where feasible and minimize resettlement where population displacement is unavoidable,
- (ii) Ensure that displaced people receive compensation, assistance and rehabilitation so that they would be at least as well off as they would have been in the absence of the project,
- (iii) PAPs will benefit from the project, and
- (iv) Project stakeholders (which includes PAPs) are consulted and given the opportunity to participate, as practicable, in the design, implementation, and operation of the project.
- (v) Appropriate assistance and compensation, in cash or in kind, provided to adversely affected people, including indigenous groups, ethnic minorities and pastoralists who may have usage or customary rights to the land or other resources taken for the project.

Three important elements of involuntary resettlement are: (i) compensation for loss of assets, loss of livelihood and income, (ii) assistance for relocation, including provision of relocation sites with appropriate facilities and services, and (iii) assistance for rehabilitation to improve, or at least restoration of incomes and living standards to the pre-project level.

### 3.2 Principles on Compensation and Entitlements

The overriding principle for all development projects is that people unavoidably affected should be compensated and assisted, so that their economic and social future would be at least as favorable as it would have been in the absence of the project. This will be accomplished using the following specific principles.

- (1) Acquisition of land and other assets and shifting of people will be avoided and minimized as much as possible.
- (2) Only PAPs who are found to be living in, doing business, or cultivating land, or having rights over resources within, the project area as the date of the census (cut-off date) are eligible for compensation for loss of assets, other assistance and rehabilitation for social and economic losses. PAPs will be compensated for affected land, either through receiving replacement land or replacement cost for their land.
- (3) All compensation for affected land, structures, and other fixed assets shall be paid at replacement cost.
- (4) The resettlement transition period will be minimized and the acquisition of assets, compensation, resettlement and rehabilitation for a segment/section or phase (except where long-term rehabilitation measures such as vocational training) will be completed at least one (1) month prior to the initiation of construction work under the respective segment/section or phase thereof.
- (5) PAPs losing all of their assets (farmland, house or business), or in case of partial loss when the remaining assets are determined as un-viable for continued use, will be entitled for compensation for the entire assets at replacement cost.<sup>2</sup>
- (6) In the case of a partial impact on the assets, i.e., partial loss of land or structures and the remaining assets remain viable for continued use, compensation for the affected assets will be paid in cash.
- (7) In case of land for land for arable land, the replacement land should be in the form of land of equivalent productive value and/or characteristics at a location acceptable to PAPs. If replacement land at a location acceptable to PAPs is not available, cash representing replacement cost of land should be compensated.
- (8) In case of land for land for residential and commercial sites, the Implementing Agency shall provide PAPs the appropriate plot of land with basic services such as electricity, water, drainage, emergency sanitation service, and access at least at the pre-project level.

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<sup>2</sup> Where significantly large or entire landholdings are affected by the project or in cases where only partial land is affected but the remaining land becomes economically non-viable, the general mechanism for compensation of lost agricultural land will be through provision of "land for land" arrangements of equivalent productivity and at a location acceptable to the PAP. Where the PAPs stand to lose residential land with structures that exist in a closely located group exceeding 20 households, the project authorities, in consultation with affected households, may offer a relocation option to fully developed resettlement sites, or alternative facilities to housing projects. If suitable residential / agricultural replacement land is not available, and at the informed request of the PAPs, cash compensation at replacement cost will be provided.

- (9) For resettlement site land, the plot owner of the proposed relocation site will also be entitled to compensation for his/her land, and depending on his/her choice, the compensation may be in cash or in the form of a replacement land within or outside the relocation site.
- (10) The project authorities will provide resettlement assistance and the following minimum allowances to eligible PAPs:
- (a) **Disruption allowance** shall be given to PAPs whose business income is temporarily lost due to the project. The allowance should be provided in cash based on the temporary projected business income lost.
  - (b) **Vulnerable group** assistance shall be provided for vulnerable families, such as female-headed household, poor families, and disabled headed households in an amount that shall assist them to become economically viable. In addition to any specific allowances to which members of vulnerable groups may be entitled, they shall also receive rehabilitation assistance based on their priorities and needs.
  - (c) **Rental allowance** shall be given to house tenants of affected main structures who will be forced to find a new place to live, at an amount equivalent to three month's rent. It shall also be given to affected persons forced to lease premises until replacement land and housing is available to them up to a maximum period of three months.
  - (d) **Transportation allowance** (in cash or in kind according to mutual agreement of the PAP and the project authorities) to relocating PAPs. When the allowance is in cash, it shall be an amount equivalent to actual transportation costs.
  - (e) **Repair allowance** is given to PAPs affected by a partial loss of structures and those affected during moving locations based on cost of repairs.
- (11) Rehabilitation assistance is a form of special skills training or other development support to PAPs severely affected due to the loss of productive assets and/or their only source of income and which will require them to engage in some other income-earning activities. The project authorities, by consulting with stakeholders, will coordinate closely with concerned agencies (local authorities and independent assigned NGOs) that have the mandate and the expertise to undertake the needed rehabilitation assistance.
- (12) The project authorities will provide vulnerable PAPs the rehabilitation assistance needed to cope with a new environment and to improve their status. This assistance shall be based on the needs and priorities of the vulnerable groups.
- (13) Any PAPs' loss due to any acquisition or restriction on access to common resources as a common property will be mitigated by arrangements of such property that will ensure, as a first option, that new access of those PAPs to an equivalent resource will occur on a continuing basis, if feasible. If it is not feasible, then other alternatives shall be identified in consultation with the PAPs.
- (14) Resettlement programs will include adequate institutional arrangements to ensure effective and timely design, planning, consultation and implementation of compensation and resettlement. The project authorities will ensure effective coordination with relevant agencies for the implementation of the Resettlement Action Plan (RAP).
- (16) Adequate arrangements will be made for the timely conduct of social assessments, inventory of affected assets, socioeconomic survey, and the preparation and

implementation of RPs, including the timely conduct of internal and external monitoring of RP implementation.

General entitlements for compensation and rehabilitation assistance for different categories of PAPs are shown in the Entitlement Matrix below but the relevant Resettlement Plan may provide for more specific or additional allowances.

**Entitlement Matrix**

|   | <b>Type of Loss</b> | <b>Application</b>                    | <b>Entitled Person</b>  | <b>Compensation</b>  |
|---|---------------------|---------------------------------------|---|--|
| 1 | Arable land         | Loss of arable land.                  | Eligible landholder   | <ul style="list-style-type: none"> <li>• Land for land or cash compensation for lost land at replacement cost according to AP choice. “Land for land” will be provided in terms of a new parcel of land of equivalent productivity and free of taxes, registration and transfer cost; at a location acceptable to PAP; and with long-term security of tenure.</li> <li>• Eligible for economic rehabilitation assistance and other allowances, as applicable.</li> </ul> |
|   |                     |                                       | Non-titled but possessory landholder  |  |
|   |                     | Lease holder and agricultural laborer | <ul style="list-style-type: none"> <li>• No compensation but additional assistance given so that they are not worse off due to the project and to enable them to replace affected assets.</li> <li>• Cash compensation for agricultural laborer equivalent to three months salary and assistance in getting alternative employment.</li> <li>• Cash compensation equivalent to replacement cost of gross harvest for one year.</li> </ul> |  |
|   |                     | Temporary acquisition or easement     | Eligible landholder   | <ul style="list-style-type: none"> <li>• Cash compensation based on opportunity lost during the period.</li> </ul>   |

|   |                  |                                  |                                      |  |
|---|------------------|----------------------------------|--------------------------------------|--|
| 2 | Residential land | Loss of residential land         | Eligible landholder                  | <ul style="list-style-type: none"> <li>• Compensation in cash at replacement cost or, at PAP choice, replacement land of minimum plot of acceptable size or a plot of equivalent size, whichever is larger, in a nearby resettlement area with adequate physical and social infrastructure.</li> <li>• Replacement land to be free from taxes, registration and transfer costs.</li> <li>• Eligible for relocation assistance and other allowances as applicable.</li> </ul>   |
|   |                  |                                  | Non-titled but possessory landholder |  |
|   |                  | Temporary acquisition            | Lessee                               | <ul style="list-style-type: none"> <li>• No compensation but additional assistance provided so that they are not worse off due to the project and enable them to replace affected assets.</li> <li>• Eligible for relocation assistance and other allowances, as applicable.</li> </ul>  |
|   |                  |                                  | Eligible landholder                  | <ul style="list-style-type: none"> <li>• Cash compensation for the net loss of income and damaged assets.</li> </ul>   |
|   |                  |                                  | Non-titled but possessory landholder |  |
|   |                  |                                  | Lessee                               | <ul style="list-style-type: none"> <li>• Assistance provided so that they are not worse off due to the project.</li> <li>• Cash compensation and other allowances, as applicable.</li> </ul>   |
| 3 | Commercial land  | Plots used for business affected | Eligible landholder                  | <ul style="list-style-type: none"> <li>• Compensation in cash at replacement cost for the affected portion or, at PAP option, replacement land of sufficient size for business continuation in market area of resettlement area or at location comparable to previous site. When the affected premises are larger than the relocation plot, cash compensation at replacement cost to cover the difference in area.</li> <li>• Eligible for relocation assistance and other allowances, as applicable.</li> <li>• Eligible for economic rehabilitation assistance.</li> </ul> |
|   |                  |                                  | Non-titled but possessory landholder |  |

|    |  |   |  |  |
|----|--|---|--|--|
|    |  |   | Lessee   | <ul style="list-style-type: none"> <li>• Assistance for finding new commercial place.</li> <li>• Eligible for relocation assistance and other allowances, as applicable.</li> <li>• Eligible for economic rehabilitation assistance</li> </ul>   |
| 4  | Structures                               | Structures affected   | Owner  | <ul style="list-style-type: none"> <li>• Compensation in cash for affected portion of the structure and other fixed assets at replacement cost, without depreciation and without deductions for salvaged material.</li> <li>• Assistance in restoration of any remaining structure, if applicable.</li> <li>• Eligible for relocation assistance and other allowance.</li> </ul> |
|    |  |   | Tenant   | <ul style="list-style-type: none"> <li>• Three months rent allowance and other allowances as applicable.</li> </ul>  |
| 5  | Loss of business / incomes or employment | Loss of business / incomes / employment                                       | Affected APs                                       | <ul style="list-style-type: none"> <li>• Cash compensation for the loss of business, incomes and wages.</li> <li>• Assistance during the transition period.</li> <li>• Eligible for rehabilitation assistance and other allowances, as applicable.</li> </ul>  |
| 6  | Standing crops, trees                    | Crops or trees affected by land acquisition or temporary acquisition/easement | Owner of crops or trees                            | <ul style="list-style-type: none"> <li>• Compensation in cash calculated on the basis of type, age and productive value of affected crops or trees.</li> <li>• Other allowances as applicable.</li> </ul>  |
| 7  | Common resources                         | Loss of access  | APs  | <ul style="list-style-type: none"> <li>• Arrangement for new resource or rehabilitation assistance.</li> </ul>   |
| 8  | Electric and/or water connection         | Loss of, or damage to, affected assets, partially or entirely.                | APs  | <ul style="list-style-type: none"> <li>• Replacement or compensation to cover cost of restoring the facilities.</li> </ul>   |
| 9  | Public facilities                        | Loss of, or damage to, public infrastructure                                  | Concerned agencies                                 | <ul style="list-style-type: none"> <li>• Replacement or compensation in cash at replacement cost to respective agencies.</li> </ul>  |
| 10 | Special assistance                       | Special assistance to vulnerable group and indigenous/ethnic minorities       | Vulnerable groups and indigenous/ethnic minorities | <ul style="list-style-type: none"> <li>• Vulnerable group and Cambodian highland people assistance / allowance based on identified needs and priorities.</li> </ul>  |

## 4 Public Participation and Consultation

The project authorities would be responsible for public consultation and public information dissemination. Consultations and public participation would be carried out as an ongoing process throughout project planning, design and implementation stages. Preparation of appropriate documents and planning and implementation for the acquisition of land and other assets will be carried out in consultation with the PAPs and the PAPs will receive prior information of the compensation, relocation and other assistance available to them including:

- The relevant details of the project;
- The resettlement plan and various degrees of project impact;
- Details of entitlements under the resettlement plan and what is required of PAPs in order to claim their entitlements;
- Compensation process and compensation rates;
- Relocation and resettlement site development operation in order to obtain agreement and support of affected people in participating in these operations; and
- Implementation schedule with a timetable for the delivery of entitlements.
- Information concerning grievance procedures and how to use them.

The project authorities would also provide a detailed explanation of the grievance process and enlist the help of village leaders and other influential community officials in encouraging the participation of the PAPs in resettlement activities. Finally, the project authorities shall attempt to ensure that all vulnerable groups including Cambodian Highland People understand the process and that their needs are specifically taken into consideration.

Public participation is performed and information is made available during both preparation and implementation of the Resettlement Plan and should include, at a minimum, public information booklet, community meetings and television and radio reports.

## 5 Grievance Redress Mechanism

Grievances related to any aspect of a project will be handled through negotiations and are aimed at achieving consensus. All complaints received in writing (or written when received verbally) from the PAPs will be documented by each level grievance committee, established by the project authorities at varying governance levels, i.e., commune, district and/or provincial levels. PAPs will be exempted from all administrative and legal fees incurred in pursuant to the grievance redress procedures. Grievance committees would comprise of representatives of PAPs, community leaders and independent assigned NGOs, in addition to the representatives of commune and district officials, and project authorities.

If PAPs do not receive any response from an established grievance redress body (at whatever level) within 20 (twenty) days from the filing of the complaint, or if the decision of grievance redress body is not satisfactory, the PAP will have the right to submit the complaint to the next higher level of the grievance redress mechanism.

If the matter still remains unresolved after all levels of grievance redress have been utilized, the complainant may then forward his/her case to a court of law.

In projects where indigenous minorities are affected, all complaints shall be discussed and negotiations shall be carried out in the community where the affected indigenous minorities live. Where necessary, the project proponents will provide assistance so that the rights of the indigenous minorities are protected.

In addition to the above mechanisms, and at the option of the PAPs, grievances may be taken to other mediating bodies, such as a council of village elders, monks at a local pagoda, or any other dispute resolution mechanism as may be decided by the PAPs.

## **6 Monitoring and Evaluation**

### **6.1 Internal Monitoring**

Where it pertains to the REF's domains, the PMU/REF would request for adequate staff to monitor the process of resettlement for RE component. In order to assist with this monitoring, the authorities shall obtain and maintain appropriate baseline data prior to the resettlement impacts. The monitoring staff will submit periodic progress reports to the involved authorities for inclusion in the progress report. The main objective of the reports is to determine whether the resettlement is effective and to make the needed recommendations for change. The monitoring staff will be present in the field as well as at every meeting related to resettlement.

### **6.2 External Monitoring**

*In the project, sub-project or any component thereof, with significant resettlement, an external agency will be contracted to monitor the process of resettlement. The external monitoring agency would be provided full access to project documents and database to facilitate monitoring process. The external monitoring agency will prepare periodic monitoring reports for submission to the PMU/REF as well as to the IDA.*

In the event monitoring by either the internal or external monitor shows that PAPs are not receiving entitlements due to them, or there are other problems in implementation in accordance with the Resettlement Plan, then the project authorities will take, on a priority basis, all steps necessary to rectify the situation and ensure compliance with a Resettlement Plan.

### **6.3 Evaluation**

Six months to one year after the completion of resettlement in the project, the project authorities will contract a competent external agency for ex-post evaluation of resettlement implementation to determine whether the objectives of the policy have been achieved and severely affected PAPs have been able to restore their incomes and livelihood to the pre-project levels. Where necessary, and based on the outcome of the evaluation, additional assistance would be provided by the project authorities to achieve the objectives of the policy framework.

## **7 Reporting and Documentation**

### **7.1 Initial Social Assessment**

The project authorities will carry out initial social assessment to determine potential social issues and likely adverse impacts at the sub-project identification stage. Based on the initial social assessment decision can be taken on the types of detailed studies and field investigations required and necessary documentation.

### **7.2 Abbreviated Resettlement Plan**

Where in a sub-project less than 200 people are affected due to the loss of assets, incomes, employment or businesses, project authorities would carry out field surveys covering full census of affected people and inventory of affected assets, and prepare an abbreviated Resettlement Plan. The abbreviated Resettlement Plan covers the following minimum elements: (i) a census



survey displaced persons and valuation of assets; (ii) description of compensation and other resettlement assistance to be provided; (iii) consultation with displaced people about acceptable alternatives; (iv) institutional responsibilities for implementation and procedures for grievance redress; (v) arrangements for monitoring and implementation; and (vi) a timetable and budget.

### 7.3 Resettlement Plan

Where in a sub-project more than 200 people are affected, project authorities would be required to conduct detailed field investigations including census, inventory of affected assets and socio-economic baseline surveys of severely affected persons and prepare a Resettlement Plan for submission to the Bank. The Resettlement Plan (RP) would include: (i) description of the project and potential resettlement impacts; (ii) principles and objectives of resettlement; (iii) socioeconomic survey and baseline information; (iv) legal framework; (v) category of PAPs and their eligibility; (vi) valuation and compensation for losses and entitlement matrix; (vii) resettlement measures; (viii) institutional arrangements; (ix) community participation and grievance procedures; (x) cost and budget; (xi) implementation schedule; and (xii) monitoring and evaluation.

## 8 Legal and Institutional Requirements

The PMUs from MIME and EDC will be jointly responsible for planning and implementation of the RE Component. The PMU in EDC will be responsible for grid extension activities; and the PMU in MIME, or REF once it is set up, will be responsible for off-grid electrification activities. As the project proponent, both EDC and MIME/REF will be responsible for, at a minimum, the following resettlement activities:

- (a) Carry out all necessary surveys and field investigations and preparation of necessary documents;
- (b) With assistance from other relevant agencies and local authorities, implementation of resettlement activities in accordance with the approved RPs;
- (c) Address all deficiencies identified in resettlement implementation;
- (d) Ensure timely allocation of resources and budgetary provisions, and process compensation claims of PAPs to ensure that the same are paid in time as planned; and
- (e) Supervise and monitor RP implementation.

## 9 Costs and Budget

Necessary funds for planning and implementation of Resettlement Plan will be provided by the project authorities. The project authorities will also provide for all costs related to mitigating adverse social impacts based on budgetary requirements established in the RP. All of these costs are to be a part of the total project cost.

Each RP will detail cost estimates for compensation and relocation (if applicable) of PAPs with a breakdown by category of PAPs and by type of asset affected, such as agricultural, residential, and commercial land; affected house, structures and other fixed assets; and type of assistances, such as transport allowance, disruption allowance, etc. The cost estimates will include adequate provisions for contingencies.

In case of overruns due to unforeseen circumstances or delays, the project authorities will allocate additional funds as necessary.

