ASSISTANCE TO THE MINISTRY OF RESOURCES AND DEVELOPMENT IN THE PREPARATION OF NATIONAL RURAL ELECTRIFICATION STRATEGY (NRES)

DRAFT WORK PLAN PROPOSAL

Gerhard Zieroth
Project Manager

PIEPSAP Project Report 4

January 2005

~ Participating Pacific Islands Countries ~
Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu
Republic Of The Marshall Islands
Ministry of Resources and Development

Assistance to Ministry of R&D in the Preparation of National Rural Electrification Strategy (NRES)

Draft Work Plan Proposal

Jan 2005
# Quality Record Sheet

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## Document Purpose

This document contains Terms of Reference for technical assistance provided by PIEPSAP to the Government of The Marshall Islands (Ministry of Resources and Development) for the Development of a National Rural Electrification Strategy

## Description

Technical Proposal, Terms of Reference

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## Checked

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## Approved

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Position: Project Manager
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### Acronyms

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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>BOO</td>
<td>Build-Own-Operate</td>
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<td>BOOT</td>
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<td>BOT</td>
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<td>CNO</td>
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<td>ECA</td>
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<td>IPP</td>
<td>Independent Power Producer</td>
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1.0 Introduction

1.1 Background

As a country with a small land area made up of low lying atolls, the RMI has limited indigenous energy resources and, like other atoll states, is dependent on imported petroleum fuels in the energy sector. In recognising the critical role that energy plays in the RMI economy, the government drafted a National Energy Policy (NEP) that received Cabinet endorsement in April 2003.

The NEP rests within the general development strategies of the Government of the Marshall Islands for achieving economic and social development. The strategies include, “increased self-reliance, renewed economic growth, enhanced employment opportunities, alleviating poverty through a balanced and more equitable distribution of income, environmental sustainability and improved health standards, education services, enhanced competitive skills and change of attitudes.”

The NEP for the Marshall Islands is one of the instruments that is put in place to assist the government to achieve the above development goals. The National Energy Policy consists of six core areas and these are:

- National Coordination and Planning,
- Renewable Energy/Rural Electrification,
- Power,
- Petroleum,
- Energy Efficiency and Conservation and
- Transport.

The NEP states the objectives of each core area and it is to be noted that to achieve the objectives, strategies and action plans have to be developed. At present the MRD undertakes a strategic planning exercises that impacts on all sections of the Ministry. In the context of this strategic planning MRD intends to further strengthen its energy division and build the capacity to guide energy sector operations in the country.
1.2 Request for PIEPSAP Support

Against the background described in 1.1 The Secretary of MRD formally requested PIEPSAP support in five activities of the Energy Planning Division that are considered priorities in the context of the overall strategic planning exercise.

The respective letter dated 22 November 2004 is annexed to this document.

1.3 Objectives

The objectives of the assignment are clearly and succinctly stated in the letter requesting PIEPSAP support. They are:

(i) Capacity Building for the Energy Planner through a training attachment at SOPAC to gain an enhanced understanding of energy policy issues and to develop a network of international and regional contacts;
(ii) Economic Assessment of Coconut Value Chain and Comparison of Rural Electrification Options;
(iii) Review of Electrification Work to date on Namdrik and lessons learned, including the impact of the project on poverty alleviation;
(iv) Development of Outer Island Electrification Strategy with renewed focus on poverty alleviation;
(v) Information and Data Gathering for EO use and distribution.

1.4 Scope of Work

The scope of proposed PIEPSAP’s services is stated in this document. It will be finalised after consultations with MRD and serve as TOR for PIEPSAP’s intervention.

- Section 2 comments on the request for PIEPSAP assistance and includes inputs to be provided by the client government (MRD).
- Section 3 describes our methodology and work plan in detail and outlines approaches to be taken in undertaking the policy framework.
- Section 4 gives estimates of total staff input for professional and support staff together and allocates tasks and time to the individual members of the team with supporting bar charts and diagrams that show proposed assignment times and reporting dates.
- Section 5 describes the proposed methodology, staffing and monitoring of training.
2.0 Comments on Request for Support

2.1 General Comments

In general, we find the request for PIEPSAP support to be clear, concise and appropriate to the stated objectives of the assignment. They follow a logical progression in requiring the PIEPSAP team to:

- Assist the Government of RMI (GoRMI) to build an operational Energy Planning Division through capacity building, training and data management;
- Develop an Outer Island (Rural) Electrification Strategy and Implementation Plan based on lessons learnt in ongoing projects and with a focus on poverty alleviation
- Support MRD in pursuing its strategic goals to increase the value of coconuts and coconut products for domestic use and export (Energy - Coconut Value Chain)

We suggest to initially grouping the tasks into two main issues i.e. capacity development for Energy Planning Division and Outer Island (rural) Electrification. This will allow us to focus initially on the issues that seem to be most pressing for MRD and GoRMI. The initial focus will not preclude the execution of other joint activities at a later stage. We confirm that our proposal complies fully with the request for PIEPSAP assistance.

2.2 Team Composition

We are conscious of the need to attune the team or task force to the specific problems that need to be addressed in the strategy development exercise and, more particularly, to the scope and scale of interventions that are supposed to be guided by the Outer Island Electrification Strategy.

We propose to initially work with a team consisting of:

A. Myazoe (Energy Planner)
G. Zieroth (PIEPSAP Manager)
J. Cloin (SOPAC Biofuel Expert)
Representative MEC (Responsible for Rural Electrification)
Representative GoRMI (EPPSO)
Consultant(s) specialized in rural surveys
The final team composition required to perform the tasks set out in this document will have to be discussed with GoRMI. These issues include:

- Roles and responsibilities of the team members
- Staff requirements to match the tasks laid out
- Responsibility for recruiting/appointing team members
- Division of labor and responsibilities between MRD and PIEPSAP
- Reporting lines and overall management

The PIEPSAP team will give a collective appreciation of public and private investment in rural energy projects across the range of sizes and technologies likely to be encountered in RMI over the coming decade.

2.3 Data, Services, Deliverables and Facilities

We note the provisions and requirements of the assignment make the following comments and qualifications that apply to our proposal:

- We assume that the GoRMI and the MEC provides the project team with all relevant data, information, reports and texts that are related to outer island rural electrification. Confidential material will be kept confidential by PIEPSAP.
- We assume that GoRMI officers will be made available for the joint activities without charge to SOPAC/PIEPSAP.
- Seminars and Workshops: All costs of seminars, workshops and working sessions (other than the PIEPSAP’s time and deliverables specified in this document) will be met by GoRMI.
- We have assumed that MRD will send out all invitations to participants and that we would receive assistance in organizing other aspects of the events.
- We expect that, upon confirmation from the GoRMI deliverables developed under the project will be available to other governments in the region as examples for rural electrification strategy development.
- It is essential to the success of the project that our team works closely with MRD and MEC to ensure effective knowledge transfer and exchange of information. For this reason we have assumed that members of the project team (PIEPSAP staff, EO and task force members will agree to gather for dedicated work sessions as required and that GoRMI will provide office facilities during work periods in RMI.
3.0 General Approach and Methodology

3.1 Background and Setting

The Government of the Marshall Islands through the 2nd National Economic & Social Summit 2001, highlighted its strategies for achieving economic and social development and these include, “increased self-reliance, renewed economic growth, enhanced employment opportunities, alleviating poverty through a balanced and more equitable distribution of income, environmental sustainability and improved health standards, education services, enhanced competitive skills and change of attitudes.” These general development objectives provide guidance for attempts to improve energy sector management.

Apart from MRD’s recently developed Strategic Plan there are 2 Government endorsed policy documents that set the scene for PIEPSAP assistance in the field of rural and outer island electrification: The National Energy Policy (NEP) of 2003 and the Outer Island Energy Policy (OIEP).

The Outer Island Energy Policy (OIEP) obtained Cabinet in July 1994. the approved the following objectives of the:

- Contribute to the social and economic development of the Outer Islands through the provision of reliable energy services;
- Encourage the use of low emission technologies and native (renewable) energy resources for the production of energy on the Outer Islands of the RMI;
- Ensure that the provision of energy services is based on both a least cost development strategy and on technically and commercially proven technologies that utilize decentralized alternative energy options without ruling out grid connections when such connections are the economically viable option; and
- Guarantee full cost recovery from consumers for the provision of energy services while making explicit budgetary provisions for Government and Non-Government assistance when such assistance is socially justified.
3.2 Problem Analysis

The need to develop a national rural electrification strategy and implementation plan stems from the existence of problems and constraints that hinder an efficient and rapid expansion of modern energy services to the remote outer island locations in RMI. We currently see the following problems:

- MRD lacks internal capacity and is unable to internally perform complex tasks such as the preparation of planning documents and documentation needed for accessing international finance, management of solicitation processes and regulation of public or private sector activities,
- Although a national energy policy is in place in RMI a long term investment program is not in place and funding of rural electrification projects remains inadequate and dependent on external finance,
- There is no list of priority locations or a set of criteria to define priorities,
- There is limited understanding of the rural market for energy making it difficult to determine the appropriate technology for use in different areas
- Technology choice in the past was driven by external donors and does not necessarily reflect an economic least cost approach or a focus on poverty alleviation,
- There are no design guidelines or procedures how to assess electricity demand and the ability or willingness to pay for electricity in outer islands,
- The policy of standardized tariffs for all families receiving solar electrification does not reflect the significant differences in family revenue and purchasing power found in outer islands,
- There are unresolved issues in the area of distribution of responsibility between MRD and MEC in the area of rural electrification planning,
- Legislation might be needed to provide the legal basis for the implementation and management of a large scale rural electrification program.

We are aware that extensive progress has already been made in developing and endorsing a national energy sector policy and we appreciate the value of efforts that have been undertaken to electrify outer
islands using either conventional or renewable energy technology. We will build on this work and thoroughly analyse experiences made.

Project funding is an important factor in designing an implementation framework for Outer Island Rural Electrification. While different donors have their own rules and preferences, the existence of a clear strategy is normally accepted as a binding guideline for project development. It will be beneficial to consider the rural electrification planning exercise as a preparatory activity to the design and implementation of the EDF 9 rural electrification activities that are planned for RMI. PIEPSAP itself is a project under the European Union Energy Initiative and as such well positioned to observe standards and requirements for the implementation of rural electrification initiatives under EDF financing.

3.3 Overview of Methodology

The tasks follow a logical progression in meeting the stated objectives of the assignment. First the capacity of the EP will be enhanced. Second an analysis of experiences made in ongoing rural electrification project is performed. The evaluation of existing experiences in RMI and elsewhere will lead to a rural electrification strategy to be drawn up in a consultative process with all key stakeholders. Then we will develop implementation and work plans together with technical guidelines, implementation procedures and model documents to facilitate implementation of rural electrification projects in accordance with the NEP, the RE strategy and current legislation. In parallel potential sources of finance for energy projects will be explored and documented.

The nature of the services, namely the formulation of a RE strategy, procedures, guidelines and project documentation, demands a close relationship and constant consultation within the team/task force. The deliverables will be ignored if they do not closely reflect the intent of GoRMI and other key stakeholders.

3.4 Stakeholder Consultation

If a rural electrification strategy is to be effective, it must reflect of the perspectives of government, the outer island population, utilities, investors, donors and other stakeholders. It must be designed to overcome their concerns with the performance of ongoing projects such as Namdrik
and meet expectations with respect to new projects. Various ministries and agencies and private sector parties are involved with or have an interest in rural electrification in RMI. Upon mobilization, we would seek to consult with them to ensure an accurate understanding of their priorities, concerns and preferences. Among those with a particular contribution to make to this assignment are:

- Ministry of Resources and Development (MRD)
- Ministry of Foreign Affairs (MFA) as an interface between GoRMI and donors
- Ministry of Public Works (MPW)
- Economic Policy, Planning and Statistics Office (EPPSO) within the Office of the President is the national development planning agency and is involved in rural development and infrastructure projects
- Office of Environmental Planning and Policy Coordination (OEPPC) also in the Office of the President is the GoRMI’s environmental focal point, which includes GEF and UNFCCC activities
- Marshalls Energy Company (MEC) as a state-owned enterprise is responsible for electric power generation and distribution on Majuro, Jaluit and Wotje. Under a Memorandum of Understanding with the GoRMI of November 2003, MEC has the mandate to install, operate and maintain renewable energy installations in remote areas
- Private sector companies

As appropriate, and as time and circumstance permit, we would also appreciate the opportunity to discuss the assignment with other parties including:

- Representatives of USA as major bilateral donor
- NGOs and civil society representatives
- Regional organizations with interests in the energy sector (SPREP)
- Multilateral agencies (e.g. EU/EDF, ADB, UNDP/GEF)
4.0 Execution of Tasks

4.1 Capacity Building Energy Planning Division

A customized approach will be taken to enhance MRD’s energy sector management capacity. Initially the focus will be to assist the Energy Planner to effectively manage energy sector projects considering that the Planner has limited energy sector background and is new on the post. In line with MRD’s request we will organize implement and finance training attachments at SOPAC in an early stage of the co-operation. A first attachment will focus on the following:

- General principles of energy and rural electrification planning
- Data collection and management
- Demand assessments and socio-economic surveys
- Technical and economic characteristics of technologies suitable for RMI rural electrification
- Economic and financial analysis of rural electrification projects
- Monitoring and evaluation of RE projects
- Potential sources of finance

We will also assist the EP to enhance her professional network in the region and arrange visits and meetings with key stakeholder agencies located in Suva such as:

- Delegation of the European Union for the Pacific
- Regional ADB Office
- UNDP Suva as lead office for RMI OP 6/GEF initiative
- Forum Secretariat as Regional Authorising Officer of upcoming EDF 9 rural electrification projects
- SOPAC and SPC
- Pacific Power Association
- University of the South Pacific
- Private sector, consulting companies etc

All members of the PIEPSAP team as well as other SOPAC staff\(^1\) will be involved in the training attachment. Preferably the EP would work on a

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\(^1\) Energy section staff, IT staff and resource economist
specific assignment (such as development of Terms of Reference for the evaluation of a rural electrification project in RMI or similar) that is directly relevant to and useful for the actual working situation within MRD. The first training attachment will be evaluated towards the end and if needed follow up training activities will be planned. Such follow up will be designed in line with the needs of the EP and could consist of another attachment, on-the-job training, participation in formal training event or in workshops seminars etc.

PIEPSAP also proposes a longer-term “backstopping service” for the EP. This again is in consideration of the specific situation within the Energy Planning Division and its limited capacity. Within the framework of such a backstopping facility the PIEPSAP team and other SOPAC energy staff would assist the EP in addressing specific problems that occur in the EP’s day-to-day work related to energy policy and planning, project appraisal, data collection, technology assessment, financing etc. Most of the services would consist of responding to e-mail requests with the submission of information, documents or statements by e-mail or telephone communication. If justified by special circumstances, limited field visits could also be arranged.

4.2 Evaluation of Namdrik Solar Electrification Project

In 1996 134 household lighting installations refrigerator power systems and several streetlights were installed under a project funded by French Aid. The 500,000 US$ project experienced serious technical problems with the pre-paid metering systems. Frequent power outages caused widespread frustration and damage to systems as households attempted to wire around the control units. By 1999, few of the household systems remained operative with only the large systems on the chiefs’ houses still working.

In 2000, the Pacific Rural Renewable Energy France-Australia Common Endeavour (PREFACE) jointly funded by Australia and France and implemented by the Secretariat for the Pacific Community (SPC) designated the failed Namdrik PV project for rehabilitation. By the end of 2003, the project completed 115 installations in 107 household 5 churches 2 schools and 1 hospital/health centre. In April 2004 MEC took over the operation of the project under a Franchise Agreement with the RMI Government. MEC employs 2 trained technicians on the island to maintain and repair the systems and collect the monthly fee. Collection of payments
remains a serious problem on the island. Collection of the monthly fees up to October 04 is only 42 %. 28 customers (27 households and one church) have never made an attempt to pay. As with the previous scheme that failed in Namdrik payment discipline seems to erode in this project. It seems that the sustainability of the project is threatened and the cause for the poor payment needs to analysed in detail. This analysis will – together with the analysis of experiences form other countries - provide background for the development of a comprehensive rural electrification strategy. A local rural survey specialist will be engaged to assist in performing the fieldwork on Namdrik. Detailed terms of reference will be developed in co-operation with the EP and MEC. The following issues seem to be prominent at this stage:

- Planning and design of the project
  - Demand analysis and forecasts
  - Technical parameters of the units
  - Consultation with the population
  - Socio-economic analysis in the PREFACE planning phase
  - Maintenance and operation planning (training, manuals, procedures)

- Current Status of the project
  - Development priorities of the population
  - Electricity demand of the population by income group
  - Ability and willingness to pay
  - Impact on poverty and poverty alleviation

- Lessons learnt and future course of action
  - Enhancement of Namdrik project
  - Support for low income families
  - Lessons for the future (alternative technologies, payment systems and the need for income generation)

### 4.3 Coconut Oil as a Diesel Substitute

MRD currently considers the valuation of coconut palms as a strategic priority. Amongst a large variety of potential uses of the palms there is the possibility to use coconut oil (CNO) as a diesel substitute. The warm climate of the RMI allows use of straight CNO as a fuel in unmodified diesel engines as the Tobolar coconut oil mill has demonstrated in a pilot project involving various diesel engines including a diesel outboard. MRD
and private sector organisations consider CNO fuel use as a strategic option for both urban and rural applications. Conditions for a larger scale project to promote CNO as a diesel fuel are excellent in RMI given that:

- Use of indigenous energy resources is an objective of the NEP
- CNO is readily available at the Tobolar oil mill
- Processing capacity exists to produce a variety of fuel qualities
- There is a strong interest in both the private and public sectors to create a knowledge centre for CNO fuel in the RMI
- Existence of a considerable production potential for CNO in the RMI
- The local production of fuel would generate substantial income for rural populations and has the potential to allow the reductions of the heavy subsidies the Government currently pays for copra.

Against this background we propose to conduct a feasibility study on CNO fuel use covering the following aspects:

- Resource assessment
  - Current production potential copra
  - Medium term potential (with and without improvement of palm stock)
  - Potential of palm wood from senile stocks
  - Production potential for CNO fuels

- Demand Analysis for CNO fuel including 10 year projections
  - Potential application in RMI (CNO,
  - Demand Majuro (Transport, power generation)
  - Demand outer islands (local marine transport, power generation, others)
  - Demand marine transport

- Crude CNO production cost (net of subsidies) for
  - Centralised production (Tobolar)
  - Local CNO extraction using micro and mini extraction techniques

- Production cost for various CNO derivatives (centralised and decentralised)
  - Mechanical filtration
  - Degumming
  - Free fatty acids removed
• Esterification (biodiesel)

• Required Inputs for large scale CNO fuel production
  o Skilled manpower, training
  o Production equipment
  o Transport and storage facilities
  o Engine modifications
  o Costs

• Financial analysis for CNO fuel production
  o Decentralised outer islands
  o Centralised Majuro
  o Combination of centralised and decentralised

• Economic and Socio-economic Analysis considering
  o Import substitution
  o Income generation in rural areas
  o Integration in value chain
  o Environmental cost (of diesel use)
  o Security of supply

• Financing and Implementation of a Pilot Project
  o Definition of project scale and scope
  o Total cost
  o Sources of funding (EDF 9, ADB, GEF others)

The above terms are preliminary and will be discussed with MRD before the study work is undertaken.

4.4 Prepare Draft National Rural Electrification Strategy

A first draft of the National Rural Electrification Strategy (NRES) will be developed on the basis of the findings of the surveys and studies described above. In addition MEC’s experience with conventional rural electrification and the costs thereof will be considered.

The document to be developed belongs to GoRMI and the PIEPSAP’s role is simply to facilitate the paper’s preparation, provide advice to guide contributions by government agencies and other sources, and to draw the different threads into a coherent strategy.
Based on the views obtained from the key stakeholders mentioned above, our knowledge of the RMI energy sector and our experience we would prepare a draft of the NRES paper encompassing issues such as:

- Institutional structures responsibilities, strengthen commercial functions and streamline administration
- Allocation of resources to Rural Electrification
- Transparent criteria for selection of priority projects
- Legal and regulatory development to align with private sector participation;
- Identification of priority projects for public and private development in rural areas;
- Development of ownership and implementation models to encourage Rural Energy Service Companies (RESCOs)
- Environmental and social standards
- Tariff and pricing policies
- Selection criteria for developers and RESCO operators;
- Public consultation steps;
- Incentives and subsidies for renewable energies and energy efficiency
- Incentives and subsidies for IPPs, SPPs and RESCOs;
- Solicitation models and concession award processes;
- Project evaluation and implementation procedures;
- Conditions to be satisfied for multilateral and bilateral agency support.

Following the pattern established in our first consultations with Government agencies, we would support the draft NRES paper with a timetable for implementing.

4.5 Stakeholder Workshop on Draft NRES

The Workshop will be held after submission of the draft NRES Paper. PIEPSAP would seek approval of the report by MRD before circulating the document. The workshop will be attended by government and private parties with a stake in energy supply and power and will provide a vehicle for soliciting comments and stimulating discussion among participants. To give participants time to order their thoughts, we will distribute the draft of the NRES Paper prior to the event. The feedback received at the first Workshop will enable us to fine-tune the paper to more accurately reflect the stakeholders’ intentions.
The process of finalizing involves broad input from task force members and senior government officials and our experience of such work is that a number of draft and review cycles may be needed before all parties can sign off on it. It is therefore important that the feedback received in the review cycles and at the Initial Workshop is comprehensive and pertinent. The NRES will be the basis for the subsequent development of Implementation guidelines and Actions Plans.

4.6 Action Plans, Work Programs and Implementation Guidelines

The NRES will provide the framework for project implementation. Project implementation requires a set of secondary documents and guidelines. Scope and details of these secondary documents will have to be discussed with MRD and the task force before PIEPSAP engages in drafting of papers. At this stage we suggest the following elements to be considered:

- Implementation guideline (demand surveys, ability to pay survey, technologies, priorities, costs, logistics, selection criteria etc)
- Model feasibility study
- Model project document
- Model environmental and social impact assessment
- Model Contracts (MEC and RESCO)
- Work program (annual and mid term) Rural Electrification

To give effect to policies in the National Policy Paper regarding project implementation we will assist in developing implementation procedures designed to bring transparency, order, timeliness, evenhandedness and, where practicable, competition to the process of awarding contracts.

4.7 Financing Rural Electrification Projects

We will examine all potential sources of project finance including the options provided under EDF, the EUEI, bilateral donors, Kyoto Protocol and ADB. Without access to finance there will be no implementation of the NRES. While larger players in the power sector will normally easily access local and international financial assistance smaller RESCOs may encounter serious difficulties. We believe that incentives should include

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\(^2\) MEC has received US$ 1.8 million in 2003 to compensate for operational losses
offering assistance to incumbent and prospective small rural entrepreneurs to address their major problems in a difficult market.

## 5.0 Time Schedule and Deliverables

### 5.1 Program

Our indicative program for delivery of deliverables is outlined below. The program is subject to discussion with MRD and will be transformed in a detailed Schedule.

<table>
<thead>
<tr>
<th>Milestone:</th>
<th>Timing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance of joint Work Program</td>
<td>Mid February 2005</td>
</tr>
<tr>
<td>Training Attachment EP</td>
<td>February/March 2005</td>
</tr>
<tr>
<td>ToR Review Namdrik Rural Electrification Project and CNO fuel study</td>
<td>March 2005</td>
</tr>
<tr>
<td>Inception Meeting in RMI Submit Inception Report to MRD</td>
<td>April 2005</td>
</tr>
<tr>
<td>Submit Draft Namdrik and CNO Study</td>
<td>May 2005</td>
</tr>
<tr>
<td>Submit Final Draft Namdrik and CNO Study</td>
<td>June 2005</td>
</tr>
<tr>
<td>Submit Draft NRES</td>
<td>August 2005</td>
</tr>
<tr>
<td>Workshop on NRES and stakeholder consultation to fine tune and update draft</td>
<td>September 2005</td>
</tr>
<tr>
<td>Final Documents</td>
<td>On a date to be agreed</td>
</tr>
</tbody>
</table>

Note: The above schedule is indicative. Exact dates will be determined during the inception phase of the assignment.
5.2 Reporting/Outputs

The reporting requirements and outputs during the assignment will also be discussed and co-ordinated with MRD. We suggest the following as a basis for discussions:

- Final Agreement (ToR) PIEPSAP for support, before commencement of the assignment (this document)
- Training Attachment Program
- Training Attachment Report/Evaluation
- ToR Namdrik and CNO Study
- Draft Namdrik Study
- Draft CNO Study
- Final Draft Namdrik Study
- Final Draft CNO Study
- Draft NRES
- Report on NRES workshop
- Final NRES Document
- Implementation Guidelines
- RE Work plans
6.0 Personnel

6.1 Team Composition and Task Assignments

Our team composition will be discussed with MRD. We recommend a clear definition of task for the assignment as shown below. The positions in the table are also indicative and will be discussed as well.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Tasks (Main Responsibilities)</th>
<th>Time Input Person Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Myazoe</td>
<td>Co-ordinator</td>
<td>Overall co-ordination of national task force organization of workshops and meetings,</td>
<td>30</td>
</tr>
<tr>
<td>G. Zieroth</td>
<td>Team Leader</td>
<td>Assist in developing and drafting reports and strategy papers, facilitate workshops and meetings, co-ordinate inputs from and supervise all PIEPSAP/SOPAC staff and consultant</td>
<td>30</td>
</tr>
<tr>
<td>J. Cloin</td>
<td>Biofuel Specialist</td>
<td>Co-ordinate CNO study</td>
<td>20</td>
</tr>
<tr>
<td>MEC</td>
<td>Legal Specialist</td>
<td>Input in Namdrik survey, CNO study and NRES development</td>
<td>15</td>
</tr>
<tr>
<td>EPPSO</td>
<td></td>
<td>Economic and national planning aspects</td>
<td>5</td>
</tr>
<tr>
<td>To be recruited by PIEPSAP</td>
<td>Consultant s Namdrik review CNO</td>
<td>Work on the review of Namdrik project in close co-ordination with the PIEPSAP team</td>
<td>40</td>
</tr>
</tbody>
</table>

6.2 Staff Schedule

We propose mobilizing the team in April 2005 after the initial Training attachment. Details will be determined in consultation with MRD.