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Consultants for Resources Evaluation

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February 9, 2008

Mr. Siseho Simasiku  
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Cc: Mr. Gerrit Clarke: ECB Project Manager for the USTDA Grant  
REFERENCE: **Task 2: Development of IPP Framework Implementation Instruments  
and Capacity Building of ECB for IPP Implementation**  
***IPP Investment Market Framework and Technical Assistance Phase II***

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Dear Mr. Simasiku:

We are pleased to enclose our Task 2 Report as required under the contract. This Report was postponed and delayed, as it required organization and conducting of two two-day workshops that needed to be planned around the busy travel schedules of many of ECB's key officials. Task 2 focuses on two key activities that are high priority for the ECB – (i) Development of IPP Framework Implementation Instruments for Large and Medium Sized IPPs and (ii) Providing Capacity Building and Skills Development Support to ECB Officials.

On behalf of CORE International and the CORE Team I would like to express our very sincere appreciation to you and other ECB officials for supporting us as we progress on this study. We are especially grateful for the support that Mr. Clarke has provided us in getting the project off the ground.

On behalf of our Team, we wish to assure ECB of our continuing commitment to providing excellent services under this Project in a timely and efficient manner. Please do not hesitate to contact me if you need any additional information.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Vinod K. Shrivastava".

Vinod K. Shrivastava  
Corporate Project Director

cc: Donald Hertzmark, Team Leader



**NAMIBIA IPP AND INVESTMENT FRAMEWORK  
TECHNICAL ASSISTANCE  
UNDER A GRANT BY THE U.S. TRADE AND  
DEVELOPMENT AGENCY**

**TASK 2: Development of IPP Framework implementation  
Instruments and Capacity Building of the ECB for IPP  
Implementation**

**PREPARED FOR  
ELECTRICITY CONTROL BOARD, NAMIBIA  
(INTERIM CONTRACTUAL MILESTONE REPORT)**

**PREPARED BY**

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**February 9, 2008**

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# 1. INTRODUCTION AND OBJECTIVES OF TASK 2

## 1.1 INTRODUCTION

In November 2007, the Government of Namibia passed Electricity Act 2007, which permits and encourages private sector investment in the country's power sector. The Electricity Control Board (ECB), the regulator in Namibia has been given the responsibility under the Act to implement the Independent Power Producer (IPP) regime in Namibia in accordance with the provisions of the Act and its own regulatory procedures approved by the ECB Board. Accordingly, ECB developed and posted a vast amount of information on its web site that would be of interest to prospective IPPs interested in Namibia's power sector.

In addition, ECB has developed a detailed procedure for the documentation and evaluation of the IPP applications. This procedure is currently being refined based on the experience ECB has had as a result of a number of application it has received for licenses for generation of power.

The U.S. Trade and Development Agency (USTDA) has provided a grant to the ECB as a follow-up to a previous grant that focused on developing various framework models for planning for an IPP regime in Namibia. The first USTDA grant completed by CORE International, Inc. supported the following key activities:

- Identification of barriers to IPP development in Namibia
- Market Model Recommendations
- Regulatory Recommendations
- Model document preparation for small and medium IPPs
- Policy Recommendations
- Barrier Mitigation

Since the completion of the first USTDA grant, Namibia has been forced to take concrete steps to address its power supply future. Key challenges facing the country include (i) the reduction in surplus electricity supply from South Africa; (ii) soaring prices for liquid and gas fuels; (iii) continuing increases in demand for mining products, and with that the electricity to process minerals; (iv) the long lead times involved in building new power plants; and (v) the desire to develop a secure power supply independently of South Africa.

Consequently, Namibia, through the ECB and NamPower, has taken several concrete steps to begin to tackle the electricity supply-side challenges facing the country. These steps include the following key ones:

- Construction of the Caprivi Link with Zambia
- Investment in rehabilitation of coal-fired station in Zimbabwe
- Encouragement of new IPP generators in Namibia

In the interim and prior to the current grant, ECB began receiving a number of IPP applications for licenses. The current project under the USTDA grant focuses on the provision of consulting services to ECB in the evaluation of IPP applications and providing capacity building to ECB officials in the implementation of the IPP framework. ECB selected CORE International, Inc., an international management consulting company based in Washington, D.C., to provide technical advisory services in order for ECB to evaluate the various IPP applications in accordance with both the Government's policy and best international practices to ensure that the review process is transparent, fair, and

accountable.

The Terms of Reference (TORs) for the USTDA Phase II Grant to ECB includes several tasks. Task 2 of the TOR focuses on providing assistance to the ECB in two key areas – (i) development of IPP framework implementation instruments for large and medium sized IPPs and (ii) capacity building and skills development support to ECB. This report is a contractually required interim milestone report for the activities conducted under Task 2.

## **1.2 TASK 2 OBJECTIVES**

Under the Phase I TA, CORE International developed frameworks for three different types of IPPs – large (over 100 MW), medium (10 - 100 MW), and small (1 – 10 MW). The first objective of Task 2 is to develop implementation instruments for large and medium IPPs. The second objective of Task 2 is for the Contractor to provide capacity building and skills development support to the Grantee. Task 2 shall be accomplished through completing the following subtasks:

### **Subtask 2.1: Develop IPP Framework Implementation Instruments for Large and Medium Sized IPP Projects**

#### **Subtask 2.1.1: Large IPP Projects**

The Grantee intends that large IPPs will be licensed on a negotiated basis rather than through the issuance of tenders that are more suitable for smaller IPPs. Therefore, the Contractor shall develop a detailed plan of the process for a review of large IPPs including the process for review of power purchase agreements (PPAs). Specifically, the detailed plan shall include the following items:

- Consistent with Namibian Law, the development of approaches and methods for greater Grantee involvement in and oversight of NamPower capacity planning to the degree that it impacts the Grantee's deliberations on IPP applications;
- A model for a consultative process between the Grantee and NamPower for the commissioning of IPPs, keeping in mind the independence of the two bodies, as a regulator and a utility, respectively;
- Consistent with Namibian Law, the development of approaches to increasing investor confidence in the fairness of NamPower dispatch results;
- Tools for the evaluation of the PPA and price adjustment clauses and methodology for avoiding misalignment of prices paid to IPPs and prices paid by the consumers;
- General principles of negotiation related to the development of IPP projects, including contract documents and methodology for ensuring regulatory compliance by licensees; and
- Other areas as they may appear during the technical assistance.

#### **Subtask 2.1.2: Medium IPP Projects (10 – 100 MW)**

In the case of Medium IPP projects, the Contractor shall:

- Develop strategies for reduced transactional costs for Medium IPPs through a Grantee program to provide standard contract forms. The Contractor shall assist the Grantee with the standardization of the key agreements developed under the Phase I TA, such as fuel supply agreements, power purchase agreements, and operational contracts, for these Medium IPPs. The Contractor shall provide advisory assistance to the Grantee on how to apply such standard contract forms to any IPP projects currently under consideration by the Grantee; and
- Provide assistance on the development of a process manual for conducting the due diligence of medium-sized IPPs including key elements of reviewing the PPAs and project risks.

## **Subtask 2.2: Provide Capacity Building and Skills Development Support to the ECB**

The electric power market, the power sector restructuring, and the regional power profile are all changing rapidly in Namibia. The Grantee needs to keep pace with these changes and ensure that rational decisions are made that are in the best interest of the Namibian economy while expanding the opportunities for private power generators. Accordingly, managers and staff from the Grantee, the Ministry of Mines and Energy, and other stakeholders require skills development in a number of areas.

The Contractor shall make every effort to work collaboratively with the Grantee and other stakeholders with the goal of providing “hands on” technical assistance and training in the areas covered under this TA, including ad hoc workshops and working sessions that shall be conducted throughout the TA each time the Contractor visits Namibia. In addition to this ad hoc training, this task is dedicated specifically to capacity building of the Grantee in a number of key areas in order to prepare the Grantee to implement a transparent and accountable process for issuing IPP licenses and enforcing compliance with licensing conditions in accordance with international best practices. Specifically, the Contractor shall design and implement a comprehensive program aimed at strengthening the capacity of the Grantee and enhancing the skill sets of the Grantee management and staff. The following are immediate priority training areas for capacity building that have been identified by the Grantee:

- Training in negotiation of large IPPs;
- Tender preparation and standard PPAs and licenses;
- Methodology for granting licenses to small IPPs;
- Best practices in arbitration and dispute settlement;
- Determination of cost of service and tariff review approaches;
- Grid code examples and regulatory procedures;
- Process for putting small IPPs on a price-taking payment schedule that is keyed to the NamPower or RED (Regional Electricity Distributors) wholesale electricity price;
- Regulatory governance as it impacts customer preparation and development of investor confidence to promote IPPs;
- Communications, outreach, public participation, and building consumer acceptance; and
- Power sector market competition and trade capacity building.

The Contractor shall consult with the Grantee and prioritize these areas for training and capacity building. The Contractor shall provide two 3-4 day comprehensive courses, covering at least five topics each, to the Grantee staff and managers. These events also shall be open to senior staff from NamPower and the Ministry of Mines and Energy.

### **Task 2: Deliverables:**

Task 2 shall include two distinct deliverables. The first deliverable will be an Interim Report including documentation of all of the activities conducted under Subtask 2.1 including the detailed plan, discussed in subtask 2.1.1, and all contract forms and the process manual, described in subtask 2.1.2.

The second deliverable will be related to the two courses and shall include the following:

1. Course Plans and Course Books for Training Courses; and
2. A CD of Reference Documents related to International Best Practices in IPP Industry Development and the Role of the Regulator.

This report summarizes the activities completed by CORE International in fulfillment of the requirements of Task 2. A large number of deliverables under Task 2 have been submitted to the ECB as intermediate deliverables. While some of the deliverables are included as annexes to this report, the course materials for the two courses conducted as part of Subtask 2.2 are incorporated by reference. Hard copies as well as CD-ROMs of the materials for the two courses have been submitted to the ECB separately.

## 2. KEY TASK 2 ACTIVITIES

The CORE Team closely worked with ECB officials in conducting Task 2. The activities under Task 2 were mostly deskwork and consultation with the ECB at strategic points. In addition, the CORE Team conducted several work sessions with the ECB officials in the following areas:

- Application of the Economic and Financial Model for Evaluating IPP Project Proposals
- IPP Risk Due Diligence Process
- Collaboration Between ECB and NamPower on the IPP Process
- Institutional Issues Related to Managing the IPP Evaluation Process

Also, as part of Task 2, CORE International designed and delivered two comprehensive two-day courses to the ECB. ECB chose to invite a number of participants from outside the ECB including NamPower, Namcor, and the Ministry of Mines and Energy.

### 2.1 SUBTASK 2.1

Subtask 2.1 focused on the development of a number of IPP framework implementation instruments. Specifically, CORE International developed a number of instruments that includes the following:

- Model formats for the logging and documentation of IPP applications
- Development of a methodology for an overall review of IPP applications and documentation of review results
- Development of a model for economic and financial analysis of IPP projects and the review of Power Purchase Agreements (PPAs)
- Development of a methodology for risk allocation and risk due diligence

As part of this subtask, the CORE Team worked with ECB managers and staff on a detailed plan for the implementation of the IPP framework for both large and medium sized IPP projects. Case studies were conducted on actual international projects. Also, the economic and financial analysis model was applied to the actual project proposals received by the ECB.

#### **Subtask 2.1.1: Large IPP projects**

The CORE Team worked with the ECB to develop an overall approach to IPP development in Namibia. This work included a detailed approach to documenting applications and procedures, the development of review methods for assessing and evaluating IPP applications, specific economic and financial tools for IPP projects and a general and specific methodology for risk allocation to the various parties.

The specific characteristics and needs of large IPP projects were distinguished from medium and small IPPs. For large IPPs the CORE Team noted that fuel type, coal or natural gas, would play an important role in the kinds of information that would need to be furnished with an IPP application.

## **IPP Application Process**

Applicants for IPP licenses in Namibia are presented with a format that has been published on the ECB website (<http://www.ecb.org.na/show.php?m=8&sm=21>). This general ECB site then directs the IPP applicant toward specific forms with explanatory guidelines that include the following two sites:

<http://www.ecb.org.na/pdf/ApplicantsGuidelineV4.pdf?m=8&sm=12>  
<http://www.ecb.org.na/pdf/InformationReq.forIPP.pdf?m=8&sm=12>

The guidelines are written generally, in order to cover whatever types of proposals IPP sponsors might wish to submit. The guideline document is in keeping with generally accepted international practices. That is, there is an explanation of the legal background of the electricity sector and the legal status of independent producers (Sections 1 and 2). The Guidelines then go on to lay out the legal basis for the ECB regulatory oversight of IPP applications and licensing in section 3 and 4. The evaluation of applicants and the criteria for issuing licenses are covered in Sections 5-7, including the right of applicants to object to ECB decisions.

The guidelines also include a number of appendices that take up most of the document (25 of 35 pages) and detail the application and licensing procedures as follows:

- Appendix 1: License Application Extract from the Electricity Act, 2000
- Appendix 2: License Application Extracts from the Electricity Regulations: Administrative
- Appendix 3: Sample License Application Advertisements
- Appendix 4: Generation License Application Form
- Appendix 5: Objections Extract from Electricity Regulations: Administrative
- Appendix 6: Evaluation Criteria Extract from the Electricity Act, 2000
- Appendix 7: Fees Extract from the Electricity Regulations: Administrative
- Appendix 8: General Information about Namibia
- Appendix 9: Incentives for Manufacturers & Exporters
- Appendix 10: Foreign Investment Act
- Appendix 11: Land ownership in Namibia

Exhibit 2-1 shows the actual flow of applications through the process that has been established by the ECB. The detailed information that must be furnished by applicants is laid out after the Exhibit. This process is revised or updated by the ECB as new issues surface. In addition, continuous dialogue is underway between the ECB and NamPower on the role of NamPower in the process. NamPower has two key roles as the national utility of Namibia. First, it is the buyer of electricity from any prospective IPP and therefore it has a negotiating role with the IPP for a viable and acceptable PPA before the PPA is submitted for approval by the ECB. Alternatively, NamPower can also be an IPP as a sole entity or in a joint venture with another IPP. Accordingly, the collaboration between the ECB and NamPower on the IPP process, specifically as related to the PPAs and any due diligence, needs to be crafted carefully in order to avoid any conflict of interest and ensure that the ECB regulatory process remains independent and transparent. CORE assisted the ECB and NamPower in this process through a number of work sessions between the two organizations.

In general, the ECB IPP application review process can be summarized as follows:

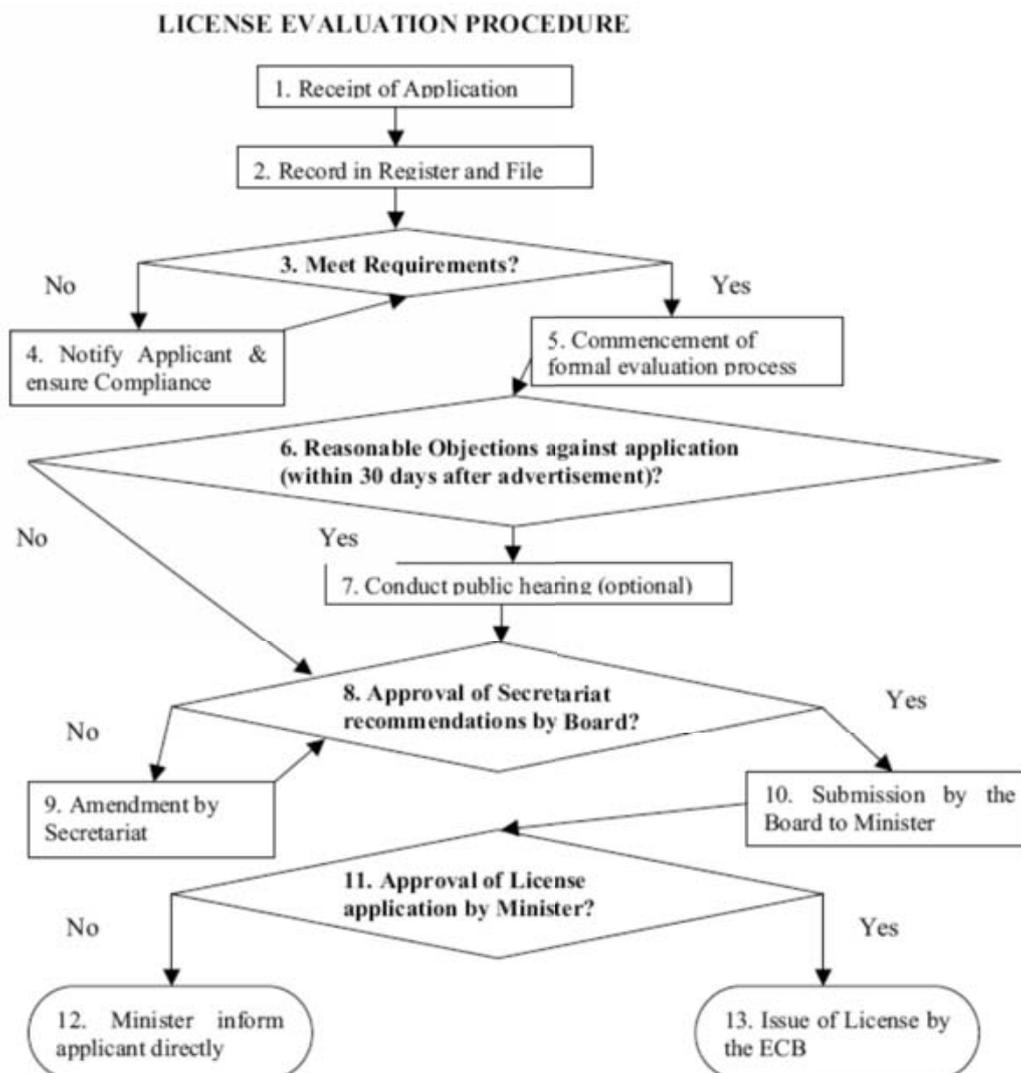
Once the application is received by the ECB (steps 1 & 2), it is checked for completeness and responsiveness to the data requirements as specified in the ECB data document cited

previously (step 3). If the document is not complete then the ECB will give the applicant an opportunity to fill in the missing data and resubmit the application (steps 4 & 5), or certify that the application is complete (step 5).

Applications are then made available for public review (minus proprietary data, step 6), and public hearing may be conducted by the ECB Secretariat (step 7) as appropriate. The ECB Secretariat will then make an initial recommendation to the ECB Board regarding the application (step 8). Applications that are not approved (step 9) may be modified and resubmitted. Applications that are approved (step 10) will be passed on to the Minister of Mines and Energy for final approval. If the Minister approves an application (step 11), then the ECB Board will issue a license (step 13). Project sponsors whose applications are rejected will be informed directly by the Minister (step 12).

This process has been established to provide a transparent, easy-to-understand application and approval process that is consistent with both the policy goals of the Ministry of Mines and Energy and the governing electricity and regulatory acts in the country.

### Exhibit 2-1: ECB Namibia IPP Application and Licensing Process



For large IPPs the key steps in the initial application process are to get the applicants conversant with the procedures and data requirements. In particular, it will be necessary to assure compliance with the data inputs that ECB and NamPower will require for an appropriate risk assessment of the IPP application. To this end NamPower has put together its own risk assessment format (see Annex 1 of this report). The NamPower risk assessment generally complements the ECB evaluation procedure. Continuous dialogue is underway between the ECB and NamPower to refine the due diligence process based on specific recommendations made by the CORE Team.

In the case of large IPPs the prospective project documents will cover the allocation of risks between and among the various parties. These agreements include:

- Fuel Supply
- Construction (EPC)
- Power Purchase (sometimes referred to as a Project Implementation Agreement)
- Operation and Maintenance, and
- Other agreements as necessary, for example, land use and conveyance

The data requirements that have been implemented by the ECB for large IPP applicants cover each of these subject areas. The **Technical Review** covers the characteristics of the power plant. Key technical characteristics for the review by ECB include the following:

- Power plant type – e.g., pulverized coal steam, CCGT, etc.
  - Conversion efficiency
  - Operational characteristics (load following capabilities, etc.)
- Technology evaluation - maturity and standardization
- Fuel type – coal, gas, oil
  - Fuel sources
  - Fuel quality
- Fuel supply proposals
- Construction period
- Plant operational lifetime
- Potential environmental and land-use impacts
- Prior track record of the IPP applicant on similar projects, if any

The economic and financial evaluation of the proposed IPP project is conducted based on specific information required as part of the application that includes the following:

- Economic and financial projections and the proposed tariff
- Assumptions used in the economic and financial analysis proposed by the applicant
- Sensitivity analysis
- Power Purchase Agreement (PPA)
- Financial capability of the applicant
- Financing plan proposed by the applicant
- Prior track record in mobilizing financing for similar projects
- Requirements for any assistance from the Government including any incentives
- Other relevant information that may affect the tariff for the delivered electricity

The data requirements specify the form in which the information is to be provided in the application. Such a standardization of information formats permits the ECB and NamPower to carry out economic and financial evaluations of the proposed power project on a standard basis. Prior to this data standardization the ECB found that a number of the IPP applications used different standards to report capacity, output, plant cost, expected tariff evolution and

other key parameters.

As a part of Subtask 2.2 (the training and capacity building component of this task the CORE Team traveled to Windhoek, Namibia in October-November 2008 and conducted two sets of comprehensive two-day courses for the ECB staff. The first set of training course covered the IPP application process, information and data requirements, evaluation of applications and summary of key risk allocation issues as manifested in the project agreements. Topics covered in the workshops are listed in Exhibit 2-2.

## Exhibit 2-2: Topics on IPP Application Process and Risk Allocation

<p><b>Module 1:</b> Generic Elements of the IPP Process</p>	<ul style="list-style-type: none"> <li>• Power sector scenario</li> <li>• Legal and regulatory framework</li> <li>• Tariff structure and subsidy</li> <li>• Actual and perceived private sector investment risks and barriers</li> <li>• Mitigation of risks and barriers</li> <li>• Government guarantees</li> </ul>
<p><b>Module 2:</b> Roles of Various Parties – Government, ECB, and NamPower</p>	<ul style="list-style-type: none"> <li>• Government: Legal framework and guarantees</li> <li>• ECB: Regulatory framework and tariff fixation</li> <li>• NamPower: IPP transaction and efficient management</li> </ul>
<p><b>Module 3:</b> International Examples of IPP Successes and Failures</p>	<ul style="list-style-type: none"> <li>• Examples and reasons of IPP successes</li> <li>• Examples and reasons of IPP failures</li> </ul>
<p><b>Module 4:</b> <i>IPP Due Diligence Process – Key Requirements</i></p>	<ul style="list-style-type: none"> <li>• <i>Established legislative framework</i></li> <li>• <i>Laws enabling foreign ownership and control of IPPs</i></li> <li>• <i>Clear, published and transparent license application review process</i></li> <li>• <i>Independent regulation</i></li> <li>• <i>Transparent tender/bid processes and evaluation criteria</i></li> </ul>
<p><b>Module 5:</b> <i>Documentation and Record Keeping</i></p>	<ul style="list-style-type: none"> <li>• Structure and frequency of records</li> <li>• Data details to be recorded</li> <li>• Software to be used</li> <li>• Ownership of software and data</li> <li>• Backup procedures</li> <li>• Period for which records of various types must be kept</li> <li>• Archiving procedures</li> <li>• Routine reporting of information</li> <li>• What events to be notified</li> <li>• Parameters to be monitored for <ul style="list-style-type: none"> <li>➢ Plant load factor</li> <li>➢ Technical loss assessment and reduction</li> <li>➢ Quality and reliability of power supply</li> <li>➢ Technical and managerial changes</li> <li>➢ Any other item as required by regulators</li> </ul> </li> </ul>

<b>Module 6:</b> Generic Process for IPP Risk Allocation and Risk Due Diligence – Including Practical Examples	<ul style="list-style-type: none"> <li>• Market risk / non-dispatch</li> <li>• Foreign exchange rate changes</li> <li>• Currency convertibility / availability and transferability</li> <li>• Changes in fuel prices</li> <li>• Costs due to change in law (such as taxes)</li> <li>• Political risk</li> </ul>
<b>Module 7:</b> Generic Power Purchase Agreements – Including a Few Practical Examples	<ul style="list-style-type: none"> <li>• Generic clauses and contractual format</li> <li>• Detailed Schedules</li> <li>• IPP project parameters</li> <li>• Tariff and pricing</li> <li>• Risk allocation</li> <li>• IPP customers</li> <li>• Power quality and penalty clauses</li> <li>• Termination and cancellation conditions and procedures</li> <li>• Mid-term review of PPAs</li> <li>• Examples of PPAs</li> </ul>
<b>Module 8:</b> Fuel Supply Agreement – Including Practical Examples	<ul style="list-style-type: none"> <li>• Generic clauses and contractual format</li> <li>• Detailed Schedules</li> <li>• Termination and cancellation conditions and procedures</li> <li>• Source of fuel and fuel supply</li> <li>• Fuel price stability</li> <li>• Quantities of fuel supply</li> <li>• Fuel storage and security</li> <li>• Examples</li> </ul>

In order to facilitate the economic and financial evaluation of the proposed IPP projects on a **consistent basis**, CORE International has provided the ECB with an Excel-based model that calculates the essential economic and financial results for each proposed IPP project, based on standardized input data.

As documented in the Task 4 Report, the deliverables for the economic and financial evaluation module and activity included the following:

- A training course in ECB headquarters in Namibia on economic and financial methods of project analysis;
- A simulation model appropriate to the needs of ECB for economic and financial analysis;
- Documentation for the model's proper use;
- A second training course focused on specific uses of the model for IPP application due diligence; and
- Ongoing technical assistance and advice for ECB during the lifetime of the project as needed and appropriate.

The Financial model is currently in continuous use by the ECB, as it has proved adaptable to a variety of project types, financing proposals and tariff impact assessments. CORE International continues to provide technical assistance to the ECB in updating the model, specifically with regard to the changed assumptions resulting from the recent economic crisis worldwide.

At the request of the ECB a further set of training workshops was held after the “nuts and bolts” presentations on information, contracts, economic and financial evaluation and case studies. These workshops focused on the regulatory issues and challenges that face an IPP program in Namibia. The purpose of these training courses was to take the information of the documented procedures and translate them into actionable procedures for the ECB.

One of the particular purposes of this training and capacity building initiative was to sensitize the ECB to how it might best approach different types of IPP proposals. That is, the CORE Team made specific distinctions between large and small IPPs, fuel cycles and fuel types, and the role of a particular project within the country’s electric power system. Exhibit 2-3 shows the content of the regulatory courses that were provided to ECB officials following the initial, more process-oriented courses:

### **Exhibit 2-3: Regulatory Process and Procedure Training Activities at the ECB**

<b>Module 1:</b> Regulatory Role in the IPP Process – Some Do’s and Don’ts	<ul style="list-style-type: none"> <li>• Regulatory Do’s (or good practice)</li> <li>• Regulatory Don’ts (or bad practice)</li> </ul>
<b>Module 2:</b> Regulatory Governance in the IPP Process Implementation – Roles of ECB, NamPower, and the Ministry of Mines and Energy (International Best Practices)	<ul style="list-style-type: none"> <li>• Role of ECB</li> <li>• Role of NamPower</li> <li>• Role of the Ministry of Mines and Energy</li> </ul>
<b>Module 3:</b> The Need for an NIRP -- Contents and Process	<ul style="list-style-type: none"> <li>• What is an NIRP?</li> <li>• How can national energy planning be driven?</li> <li>• The NIRP process</li> <li>• The value of an NIRP</li> </ul>
<b>Module 4:</b> Regulatory Determination on Risks and Financial Viability of IPPs	<ul style="list-style-type: none"> <li>• <i>Risk determination of IPPs</i></li> <li>• <i>Risk mitigation process</i></li> <li>• <i>Financial viability of IPPs</i></li> </ul>
<b>Module 5:</b> Solicited Versus Non-solicited IPPs – Pros and Cons and international Best Practices	<ul style="list-style-type: none"> <li>• <i>Pros and cons of solicited IPPs</i></li> <li>• <i>Pros and cons of non-solicited IPPs</i></li> <li>• <i>International best practices for IPPs</i></li> </ul>
<b>Module 6:</b> Detailed Case Study of a Successful IPP – Lessons Learned	<ul style="list-style-type: none"> <li>• Reasons of successful IPPs</li> </ul> <p><b><i>Lessons learned</i></b></p>
<b>Module 7:</b> Customer Preparation and Investor Confidence Development – Roles of Various parties (ECB, NamPower, and the Ministry of Mines and Energy)	<ul style="list-style-type: none"> <li>• Roles of ECB, NamPower, and Ministry of Mines and Energy in <ul style="list-style-type: none"> <li>➤ Creating awareness in customers about IPPs</li> </ul> </li> </ul> <p><b><i>Developing investor confidence</i></b></p>
<b>Module 8:</b> Communications, Outreach, Public participation, and Building Consumer Acceptance	<ul style="list-style-type: none"> <li>• Methods of communication</li> <li>• Public participation</li> </ul> <p><b><i>Consumer acceptance process</i></b></p>

The risk allocation and risk due diligence elements of the training courses were delivered in several of the modules. All of the discussion of project agreements, including a generic discussion of risk allocation was aimed specifically at the question of allocating risk –

identification of the risk, who should bear it, how much it costs, and what are the consequences of inappropriate or missing risk allocation. The case studies of successful and not-so-successful IPPs in the second set of training courses focused on the role of the regulator, ECB, as the first line of decision-making in Namibia regarding the allocation of risk. There was one module that specifically focused precisely on the regulator's role in risk identification and allocation.

The module on the role of the ECB and the module on solicited v. unsolicited IPP proposals was one of the places that primary distinctions were drawn regarding the variation of procedures in the ECB according to the project size. While much of the attention of the ECB has been taken up by the large IPP applications, it is likely that much of the actual work of the ECB on IPPs will be concerned with smaller projects. How these projects differ from the large IPPs is covered in the following section.

### **Subtask 2.1.2: Medium and Smaller IPP projects**

All of the data and application process requirements that CORE developed with the ECB were meant to cover any type of IPP project. However, there will be some differences between large IPP projects and those of lesser generation capacity. Correspondingly, there are some provisions in both the application and data sides of the IPP procedures that will apply more to large projects than to smaller ones.

Large projects, almost by their nature, in a country the size of Namibia, will be one-off activities. There is little possibility of building, say, multiple coal-fired power plants (the Eskom "six-pack" of six 600 MW coal-fired stations at one location) in a system such as the one that NamPower operates. As a result, the technical specifications are given, not by NamPower, but by each applicant. For gas or oil-fired plants the technical evaluation is much the same, and for similar reasons – a lack of likely replicability of an individual project in Namibia.

Smaller power projects on the other hand, especially those based on renewable energy prime movers, will be different from the larger plants in several respects as follows:

- The technology is likely to be a standard one widely available elsewhere in the world
- The project's impact on the operation of the NamPower system is likely to be slight
- Construction costs and operational characteristics are likely to be quite similar to experience in one or more other countries
- Smaller projects can be price takers, not price makers

The greatest single difference between large projects and other IPPs in Namibia rests on the overall system impact of the proposed project, both operationally and financially. Whereas smaller IPPs are used to a set of standard terms and conditions for prices, risk allocation, guarantees, land use, and the like, large project developers will want to negotiate from a custom agreement template rather than a cookie cutter one.

The CORE Team has tried to keep these differences in mid when making allowances for the project agreements and risk allocation. For example, in the discussion of risk allocation in construction agreements, the CORE Team noted that large projects would generally use many customized parts and components, while smaller projects should be expected to use standardized and off-the-shelf components.

With respect to prices, a smaller project will be presented with a standard offer, with adjustments according to the ECB's own schedule. Larger projects will need to conform

their pricing adjustments to the ECB's schedule, but the initial price level is likely to be vigorously negotiated. Some large IPP promoters may even resist the idea of adjustments on the ECB schedule, as evidenced by the "creative" pricing adjustments shown in the financial proposals of the large IPP projects.

***ECB may entertain unsolicited bids for smaller IPP projects, but larger projects need to be solicited on the basis of a joint ECB-NamPower understanding of future generation needs.***

The implementation agreements for IPPs should summarize the rights and responsibilities of the various parties. The ECB strategy in large projects must be to ensure that the public interests that it represents and the public policies that it is obliged to implement are part of the agreements from the beginning. In this sense, ECB will need to set specific framework conditions at the beginning of each IPP contract negotiation. These framework conditions should be consistent with the initial bidding and document requirements for a project to receive a preliminary license from the ECB.

For smaller projects the ECB will need to be more pro-active, controlling both the pace of the industry expansion and the legal terms and conditions for the implementation agreements. CORE has suggested that the ECB provide standard contract templates for these smaller projects, differentiated by technology and fuel type. A template PPA was prepared and submitted to ECB as part of Phase I of the Technical Assistance.

Exhibit 2-4 shows some of the key issues in risk allocation and how the role of the ECB will vary according to the size of the proposed IPP project.

#### **Exhibit 2-4: Contributions by ECB to Mitigating IPP Project Risks**

<b>Risk.</b>	<b>Recommended Role of ECB</b>
Fuel Prices	Adjustment according to tariff periods for <b>large</b> projects, fixed real prices in <b>smaller/renewable</b> projects
Fuel acquisition currency risk	Fixed in FSA, rather than PPA
Plant design	Environmental parameters fixed at design stage by ECB for <b>large</b> plants; possibility of standardized design for <b>smaller</b> plants
Inappropriate design or materials	ECB has role at beginning of process; for <b>smaller</b> plants ECB can promote plant completion by hiring owner's engineer
Tendering	ECB can specify most of the essential information to be furnished in a form that indicates whether a company is (i) competitive financially; (ii) acceptable environmentally; and (iii) willing to accept ECB tariff provisions
Price Adjustments	ECB provides template for <b>larger</b> projects that must be incorporated into PPA. For <b>smaller</b> projects ECB specifies price and adjustment methods precisely.
Dispute Resolution	ECB helps to define appropriate fora for dispute resolution. ECB should provide precise forum in case of <b>smaller</b> and renewable energy plants.

A good strategy for ECB in IPP project negotiations involves (i) preventing unqualified bidders from participating in the process through information and disclosure requirements; (ii) conforming pricing adjustments to the country's tariff process, thereby preventing the primary cause of PPA failure; and (iii) keeping disputes about small power plants within the country.

Annex I includes a number of tools developed by CORE International for the implementation of the IPP Framework. Specifically, the following IPP framework implementation tools and instruments are included in Annex I:

1. Detailed list of data requirements
2. Due Diligence procedures
3. Generic risk allocation guidelines
4. Risk allocation by project agreement – detailed discussion of issues and roles of parties
  - a. Fuel supply agreement
  - b. Construction agreement
  - c. Project Implementation agreement (PPA)
5. Economic and Financial Evaluation Model
  - a. Presentation on use of model
  - b. Users guide (included with model)

## 2.2 SUBTASK 2.2

The focus of this subtask was to provide capacity building to ECB staff in a number of areas directly relevant to implementing an IPP regime in Namibia. In accordance with the TORs for Task 2, CORE International proposed a series of courses for ECB's consideration, which included the following:

- Training in negotiation of large IPPs;
- Tender preparation and standard PPAs and licenses;
- Methodology for granting licenses to small IPPs;
- Best practices in arbitration and dispute settlement;
- Determination of cost of service and tariff review approaches;
- Grid code examples and regulatory procedures;
- Process for putting small IPPs on a price-taking payment schedule that is keyed to the NamPower or RED (Regional Electricity Distributors) wholesale electricity price;
- Regulatory governance as it impacts customer preparation and development of investor confidence to promote IPPs;
- Communications, outreach, public participation, and building consumer acceptance; and
- Power sector market competition and trade capacity building.

Based on this list of proposed topics, ECB selected two courses as follows:

### **COURSE 1: IPP DUE DILIGENCE PROCESS AND RELATED ISSUES (OCTOBER 28 AND 29, 2008)**

This two-day course included two parts. Part 1 focused on various elements of the IPP process including the roles of key parties. Part 2 focused on key technical and financial matters related to the IPP Process and IPP due diligence. The following sub-topics were included as part of this course:

## **PART I: THE IPP PROCESS, DUE DILIGENCE, AND RECORD KEEPING**

### **Day 1 of the Course**

- Module 1: Generic Elements of the IPP Process
- Module 2: Roles of Various Parties – Government, ECB, and NamPower
- Module 3: International Examples of IPP Successes and Failures – Lessons Learned
- Module 4: IPP Due Diligence Process – Key Requirements
- Module 5: Documentation and Record Keeping

## **PART II: THE IPP PROCESS – PPAs AND VARIOUS CONTRACTS**

### **Day 2 of the Course**

- Module 6: Generic Process for IPP Risk Allocation and Risk Due Diligence – Including Practical Examples
- Module 7: Generic Power Purchase Agreements – Including a Few Practical Examples
- Module 8: Fuel Supply Agreement – Including Practical Examples
- Module 9: Tx Connection Agreement – Including Practical Examples

## **COURSE 2: REGULATORY GOVERNANCE IN THE IPP DEVELOPMENT PROCESS**

This two-day course focused on areas where the regulatory process needs to be strengthened as ECB moves forward to implement the IPP program. It also included the roles of various parties and initiatives by the ECB and NamPower vis a vis prospective IPPs and the broader energy sector stakeholders including the REDs. Specifically, the following topics were included in this course in two parts:

### **PART I: REGULATORY GOVERNANCE IN THE IPP PROCESS – LESSONS LEARNED**

#### **Day 1 of the Course**

- Module 1: Regulatory Role in the IPP Process – Some Do's and Don'ts
- Module 2: Regulatory Governance in the IPP Process Implementation – Roles of ECB, NamPower, and the Ministry of Mines and Energy (International Best Practices)
- Module 3: The Need for an NIRP -- Contents and Process
- Module 4: Regulatory Determination on Risks and Financial Viability of IPPs
- Module 5: Solicited Versus Non-solicited IPPs – Pros and Cons and international Best Practices

### **PART II: REGULATORY GOVERNANCE IN THE IPP PROCESS – LESSONS LEARNED**

#### **Day 2 of the Course**

- Module 6: Detailed Case Study of a Successful IPP – Lessons Learned
- Module 7: Customer Preparation and Investor Confidence Development – Roles of Various parties (ECB, NamPower, and the Ministry of Mines and Energy)
- Module 8: Communications, Outreach, Public participation, and Building Consumer Acceptance (International Best practices)

Annex 2 includes the materials included in the Workshop Book for Course 1: IPP Due Diligence Process and Related Issues.

Annex 3 includes the materials included in the Workshop Book for Course 2: Regulatory Governance in the IPP Process – Lessons Learned

Annex 4 includes a list of participants in the two IPP courses.

### 3. KEY FINDINGS AND CONCLUSIONS

Namibia is undergoing a rapid transformation in its electricity sector. The following are some of the key developments in the electricity sector in Namibia:

- In November 2007, the Government of Namibia passed the Electricity Act 2007, which provides one of the most reformed and restructured environments for the power industry in the SADC Region, clearing the way for private power development in the country.
- The transformation of the Electricity Supply Industry (ESI) has resulted in the formation of three REDs. Two additional REDs are expected to be formed in the near future.
- ECB has issued guidelines for IPPs, which has resulted in a number of IPP proposals for licenses. ECB has issued several conditional licenses.

The activities in Task 2 address two of the highest priorities of ECB.

- IPP Due Diligence Process and Decision Making
- Capacity Building and Training of ECB Officials and Staff in Regulatory Aspects of IPP Decision Making

#### 1. IPP DUE DILIGENCE PROCESS AND DECISION MAKING

In the completion of Task 2 one of the major elements of the project was completed and transferred to the ECB. Prior to the completion of this task CORE and the ECB staff worked together on IPP applications in terms of data quality, sufficiency and applicability. Once the process was transferred to the ECB they proved able to work with the tools provided by CORE and are now independent of the CORE advisors, with the exception of the occasional clarifications and advice on various technical issues.

Such a transition in roles is the precise intent of this project and CORE is proud to have been a part of this process for the ECB and Namibia. One of the most promising areas of knowledge transfer was with the economic and financial evaluation of IPP proposals. Prior to this project IPP applicants were able to go to the ECB with a financial model of dubious validity, generality, or appropriateness to Namibia. Through the process of developing, training and reworking this model, all in close collaboration with the ECB; the CORE Team was able to provide two key elements of improvement for the ECB team:

1. The minimum data set required to evaluate a project properly was specified for all applicants
  - a. Units
  - b. Terms
  - c. Tariff assumptions
2. The ECB team was able to use the model to “reverse engineer” bids that contained non-standard methods, data or assumptions, so as to determine the key implicit assumptions of the applicants as regards tariff adjustments, financing, project costs and the like.

The evaluation methodology is now entirely in the hands of the ECB. On the risk allocation side the ECB now has guideline documents for the key risk allocation agreements and case studies that show how successful and unsuccessful projects have implemented many of these agreements. Of particular use has been the impetus to standardize the allocation of risk and pricing for smaller IPP projects. The information, case studies and other documentation provided by CORE have given the ECB a standard by which IPP project proposals can be assessed.

Most important of all is that the evaluation process that the CORE Team has developed with the ECB has been in a very real sense a joint activity, with much back and forth on issues both large and small. It is open and transparent, conforms to Namibian Law and is accessible to all potential IPP project developers. To this end the IPP application, data, evaluation and decision process now belong very much to Namibia, which was precisely the purpose of the project.

## **2. CAPACITY BUILDING AND TRAINING OF ECB OFFICIALS AND STAFF IN REGULATORY ASPECTS OF IPP DECISION MAKING**

Both during the Phase I Technical Assistance and this project, it has been clear that the capacity of ECB needs to be significantly enhanced. Even before the need for the development of the IPP regime ECB was short of staff. With the significant additional burden of documenting and evaluating IPP project proposals, ECB must now engage in a large number of additional technical and management functions including the following:

- Publishing of guidelines for IPP applicants and updating the guidelines based on new developments and any changes in the Law
- Extensive documentation of initial applications and engagement with the IPP applicants throughout the decision-making process
- Due diligence and application evaluation to assess the desirability of proposed IPP projects and either rejecting the application or providing the applicant a full or conditional license
- Monitoring all conditional licenses and responding to any disputes of ECB decisions
- Extensive need for public hearing on the IPP proposals as warranted
- Coordination with relevant government agencies
- Coordination with NamPower on key IPP issues

All of these and related requirements have imposed a considerable burden on the existing ECB managers and staff.

In addition, with the opening of the Namibian power market to IPPs (both domestic and international), there is a need for the ECB staff and officials to be fully conversant with international practices and norms related to regulatory aspects of IPP project decision making. This means that ECB managers and staff are in need of constant upgrading of their skill sets in a variety of technical, economic, and financial areas. Experience around the world shows that it is relatively common to expect legal challenges and disputes from the IPP applicants who are rejected or provided only a conditional license. This will add further burden on the ECB in terms of legal due diligence and dispute settlement.

These realities mandate that ECB focus on two key issues urgently. First, it is necessary to conduct a full management review of the ECB in light of its increased responsibilities and develop an optimum organizational structure and staffing plan consistent with international practices and the needs in Namibia. Secondly, ECB needs to adapt a Training Program for

commissioners, executives, and staff along the lines of the recommendations made by CORE both in the Phase I TA and under this project. The final Training Program to be adapted by the ECB should become married to the ECB culture and appropriate resources should be committed to implementing the program including an aggressive strategy to seek external donor financing.

## 4. RECOMMENDATIONS

As mentioned earlier, Task 2 addressed two key areas of need in ECB. Throughout the project, we have provided specific guidance, advice, and recommendations to the ECB aimed at strengthening the organization to manage the regulatory aspects of IPP decision-making. Our specific recommendations in the two areas under Task 2 follow.

### 1. IPP DUE DILIGENCE PROCESS AND DECISION MAKING

Based on extensive interactions with ECB managers and staff as well as NamPower officials and an analysis of the IPP project applications the CORE Team has provided continuous advice to the ECB aimed at strengthening its IPP due diligence and decision-making process. The following is a summary of key recommendations in this area:

1. ECB should periodically update the assumptions in the economic and financial model based on changes in the international markets and the world economy, as is currently the case. For examples, fuel prices have significantly changed in recent months and that would have an impact on all IPP projects. Notwithstanding the need for periodic updating of the model, ECB reserves the right to ask IPP applicants for a revised proposal at any time.
2. ECB should consider the desirability of posting the model on its web site under Instructions to IPP Applicants requiring that all IPP applicants conform to the model as closely as possible when submitting their project applications. This would have the added advantage that ECB would be able to compare and contrast like IPP project proposals.
3. ECB should develop a specific tariff regulation for IPPs. This regulation should provide a firm legal underpinning for an orderly adjustment of infeed tariffs for IPPs based on the ECB's own tariff adjustment process. The guidelines for such a regulation are provided in the risk allocation memorandum that was provided to ECB as a part of both this Task and Task 1.
4. One of the key areas that needs urgent attention is the collaboration between the ECB and NamPower on a host of issues related to the development of an IPP industry in Namibia. Despite a number of extensive work session including some with the participation of CORE Experts there continue to be many gaps in this area. At a minimum, ECB and NamPower need to develop specific guidelines for the division of labor in negotiating PPA – what size/type of projects fall into the province of each one, the technical assistance role of NamPower to ECB, etc. Furthermore, the process of collaboration between the ECB and NamPower needs to have the commitment of the top management of the two organizations and institutionalized into day-to-day working of the two bodies.
5. ECB and NamPower should investigate risk allocation by fractional ownership of IPPs by different parties – developers, large users, foreign buyers. This method of risk allocation has been used to good effect in other countries and is sometimes referred to as a “vertical slice” project ownership model. In this regard, the discussions underway between the ECB and NamPower should be intensified and appropriate conclusions finalized as soon as possible. This is critically important so that ECB and NamPower do not end up inadvertently giving conflicting information to the IPP industry.

6. Namibia currently does not have a National Integrated Resource Plan (NIRP). Typically such a plan guides the development of the energy industry in a country and prioritizes the allocation and use of resources. It is recommended that the Government of Namibia commission the development of an NIRP as soon as possible. The process of NIRP development should be managed by an independent entity such as the Ministry of Mines and Energy or the ECB and not by a party with a vested interest such as the national utility or any of the REDs. Under Task 3, CORE International developed and provided to the ECB Draft Terms of Reference and budget for developing an NIRP for Namibia.
7. In addition to streamlining the process for review of IPP proposals, the Government of Namibia also needs to streamline the institutional structure to manage the development of the IPP industry in Namibia in accordance with all applicable Namibian Laws. CORE recommends that the GoN consider appointing a high level “IPP Working Group” and charge the group with the responsibility for guiding the development of the IPP industry in the country
8. As mentioned previously, the economic and financial model will need to be revised and updated on a regular basis – all such models do – and the ECB should ensure that there is an understood and transparent process for updating both the logic and data of the model.

## **2. CAPACITY BUILDING AND TRAINING OF ECB OFFICIALS AND STAFF IN REGULATORY ASPECTS OF IPP DECISION MAKING**

Detailed recommendations have been provided to the ECB through the Phase I and under this Phase II Technical Assistance. Therefore, in this section, we are highlighting only the most critical needs for capacity building and training.

- Conduct a management review of ECB’s structure, operations, functions, and develop a management and staffing plan to effectively discharge the full array of ECB’s mandated responsibilities including the regulation of the IPP industry.
- Finalize and implement a Training Program based on the Training Needs Assessment Report submitted by CORE previously.

# **ANNEX 1: DETAILED TOOLS AND INSTRUMENTS FOR IPP FRAMEWORK IMPLEMENTATION**

Annex I includes a number of tools that were developed by CORE International. ECB personnel were provided extensive training in the use of these tools through a number of interactive working sessions and mini workshops. The following tools and instruments are included:

- 1. Model formats for the logging and documentation of IPP applications**
  - a. Data requirements
  - b. Record keeping
- 2. Development of a methodology for an overall review of IPP applications and documentation of review results**
  - a. Roles of the parties
  - b. Due diligence process
  - c. Record keeping and transparency of due diligence process
- 3. Development of a model for economic and financial analysis of IPP projects and the review of Power Purchase Agreements (PPAs)**
  - a. Role of economic and financial models
  - b. Construction of economic and financial models
  - c. Data for models and database upkeep
  - d. Use of economic and financial models
  - e. Future issues in economic and financial modeling
- 4. Development of a methodology for risk allocation and risk due diligence**
  - a. Generic description of risk allocation process
  - b. Role of PPA in allocating risk
  - c. Role of fuel supply agreement in risk allocation
  - d. Transmission connection agreements
  - e. Critical Background Information for IPP Decision-making
    - i. National integrated resource plan (NIRP)
    - ii. Transmission/grid code
    - iii. Distribution/grid code

All of these tools have already been submitted to the ECB as intermediate deliverables. Some of the key tools are briefly summarized in this Annex.

## **1. Data Formats and Record Keeping**

Early during the Technical Assistance, the CORE Team developed a detailed format for ECB for recording the information submitted by each IPP proposer. This format was used for recording each IPP application received by the ECB. Throughout the TA, this format has been updated. A copy of the blank format is enclosed as Exhibit 1-1.

In addition, the ECB engaged CORE in a parallel contract to develop detailed record keeping procedures for all IPPs. Under that separate engagement, the CORE Team developed detailed procedures for all record keeping typically practiced in the IPP industry.

## **2. Methodology for Review of IPP Applications**

The format presented in Exhibit 1.1 also includes the recording of all technical and financial review of the proposed IPP project.

## **3. Economic and Financial Evaluation Model**

### **3.1 Task 4 Objectives and Activities**

The CORE Team Leader worked closely with ECB's Head of Tariffs and staff in conducting Task 4. The activities under Task 4 were mostly split between deskwork conducted at the home office and training sessions with ECB staff in Windhoek. Two trips to Namibia were made in conjunction with this Task. The Team Leader provided an introduction to the skills required to analyze and assess projects from an economic standpoint, and the full presentation given at that time is included as Annex 2 of this report. Subsequent to that initial mission CORE adapted and developed a financial and economic simulation model based on a simulation model already used for numerous World Bank projects, as well as the Due Diligence task (Task 1) for this project. After initial exposure to the model some significant modifications were made to the modeling framework, including the use of additional foreign currencies and estimates of various project parameters.

Finally, a modified simulation model was provided for ECB, along with training in its use.

#### **3.1.1 Subtask 4.1**

Subtask 4.1 focused on the following specific activities:

- Prepare ECB staff to use a financial and economic simulation model
- Conduct a course for ECB staff on the elements of economic and financial analysis
- Develop and adapt a financial and economic simulation model for use by ECB staff to evaluate IPP applications;
- Train ECB staff in the use, strengths and weaknesses of such a model; and
- Use the model as an element in the due diligence to be performed on proposed private power generation plants.

In February 2008 the Team Leader traveled to Namibia and presented a workshop on present value methods and economic/financial analysis. The Workshop took place over 4 days and was attended by the Tariff department at ECB plus Mr. Clarke. The presentation that was the basis of the Workshop is shown in Annex 2. An existing economic and financial simulation model of power plant investments was chosen to be adapted for modification for this project. Of a number of available simulation models, the particular one chosen has proved remarkably robust and adaptable to a wide variety of settings and project types. This model was introduced to the ECB staff in February 2008 and a copy of the model was left with ECB.

**Exhibit 1.1: Template for Recording IPP Application Data**

<b>NO.</b>	<b>CATEGORY OF INFORMATION SUBMITTED WITH THE APPLICATION</b>	<b>COMMENTS ON THE INFORMATION SUBMITTED BY IPP APPLICANT (S)</b>	<b>SUMMARY OF REVIEW COMMENTS AND SPECIAL REMARKS</b>
<b><u>A. DOCUMENTATION OF THE IPP APPLICATION AND MATERIAL SUBMISSION</u></b>			
1.	Name, Address and Contact Information of the IPP Applicant		
2.	Date of Initial Application		
3.	Dates of Any Subsequent Submissions of Additional Information		
4.	Correspondence Between the ECB and the Applicant		
5.	List of Documents Submitted with the Original IPP Application		
6.	List of Any Additional Documents and Materials Submitted by the IPP Applicant		

7.	Items Missing Based on Comparison of the Materials Submitted with the ECB Requirements as Published in the IPP Applications Guidelines		
8.	Actions Taken by the ECB from the Time the IPP Application was Submitted		
9.	Level of Compliance with the ECB IPP Applications Guidelines and Requirements V3		
10.	List of Items and Materials Required to Complete the IPP Application		
11.	Objections to the Application		
<b>B. TECHNICAL REVIEW OF THE PROJECT AND MATERIALS SUBMITTED BY THE IPP APPLICANT</b>			
1.	Project Size, Number of Units, and Time Frame		
2.	Technology Proposed by the Applicant Including Fuel Type		
3.	Project Site and Site Description Including Site Maps and Data		
4.	Technical Details and Technical Feasibility Analysis of the Project		

5.	<b>Economic Analysis of the Project – Assumptions, Soundness of the Methodology, Sensitivity Analysis, and Economic Internal Rate of Return (EIRR) of the Proposed Project</b>		
5.	<b>Economic Analysis of the Project – Assumptions, Soundness of the Methodology, Sensitivity Analysis, and Economic Internal Rate of Return (EIRR) of the Proposed Project (Continued)</b>		
6.	<b>Financial Analysis of the Project – Assumptions, Soundness of the Methodology, Sensitivity Analysis, and Financial Internal Rate of Return (FIRR) of the Proposed Project</b>		
7.	<b>Tariff and Price Analysis and the Soundness of the Analysis</b>		
8.	<b>Status of Power Purchase Agreement (PPA)</b>		
9.	<b>Assessment of the PPA if a PPA is Included with the Application</b>		
10.	<b>Environmental Assessment of the Project</b>		
11.	<b>Development Impact Assessment of the Proposed Project</b>		
12.	<b>Financial Information on the Applicant – Financial Statements, Tax Returns, Financial Declaration, Certificate of Good Standing, Any Other Financial Information on the Applicant(s)</b>		

13.	Project Cost Estimate – Methodology and Soundness of the Cost Estimates		
14.	Project Financing Plan		
15.	Project Risks		
16.	Extent of Local Partner(s) Involvement		
<b>OVERALL RECOMMENDATION</b>			

### **3.1.2 Subtask 4.2**

Subtask 4.2 already covered under the Task 4 Report focused on the use of the economic and financial model by ECB officials to evaluate the proposed IPP projects. Subsequent to the February 2008 Workshop, there were further adaptations of the model for the ECB. These included the addition of new parameters for plant efficiency, plant operational factors (hours per year of operation), additional currency choices, expression of all energy analysis in SI units, among others. These additional capabilities are presented in easy-to-use menu formats. An earlier version of this model was used to perform the project due diligence that was included in the deliverable for Task 1, so the simulation analysis has been well adapted and vetted for the Namibian situation. The data requirements of the model were also used as the template for the financial and economic data requirements now imposed on potential investors. The actual model has been transferred to ECB on the CD-ROM and ECB personnel are routinely using this model for a variety of purposes.

A second training Workshop was conducted in late-July early August 2008 at the ECB to hand over control of the economic and financial due diligence process to the ECB staff. This workshop focused on training in the specific uses of the financial/economic model, its application to real IPP opportunities and interpretation/reporting of results. It was critical to engage the ECB staff in the actual reporting and interpretation of results for current IPP applications in order to assess the degree of progress attained by the Tariff Department staff on the use of the model.

Full Instructions for the use of the analysis model are included on the second sheet of that model. The instructions use hypertext connections so that the user can go quickly from the instructions to the model and back. Exhibit 1.2 shows the instructions sheet for the model as well as a final version of the data template that was provided for ECB to be used in its IPP applications.

All of the deliverables scheduled for this Task have been given to ECB in electronic form. Technical assistance is provided on an as-needed basis throughout the life of the project. As noted previously, these deliverables include the following:

- A training course in ECB headquarters in Namibia on economic and financial methods of project analysis;
- A simulation model appropriate to the needs of ECB for economic and financial analysis;
- Documentation for the model's proper use;
- A second training course focused on specific uses of the model for IPP application due diligence; and
- Ongoing technical assistance and advice for ECB during the lifetime of the project as needed and appropriate.

## Exhibit 1.2: Instructions in the Use of the Economic and Financial Model

### Instructions For Filling in the Parameter Sheet

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#### Plant

<b>Capacity Factor</b>	% of time the plant is on line, typical values are .85 for coal and .5 for small hydro. <b>Enter as %.</b>
<b>O&amp;M factor</b>	% of capital costs for non-fuel O&M
<b>Soft Costs (%)</b>	Construction, land acquisition, permits, etc. as % of equipment costs

#### Equipment Cost

<b>\$/MW</b>	USD per MW of installed capacity	<b>Note:</b> you may click on the link to the capex calculator if you have total capex <i>only</i> or capex in a <i>non-USD</i> currency
<b>MW</b>	MW of installed capacity	
<b>Construction Period</b>	number of years (assumed to be 2)	

**Proportion of Capex/y** year 1 and year 2 proportions of capital expenditures

#### Market

<b>Output Price</b>	Main: USD per kWh for amortization period Secondary: USD per kWh after amortization completed
<b>Use Currency . . .</b>	If using non-USD for output price, enter "yes", otherwise enter "no"
<b>Other Currency</b>	Enter 1 for home currency, 2 for second foreign currency, 3 for third foreign currency, <b>Enter Output Price in Chosen Currency</b>
<b>Oil Price (\$/bbl)</b>	Enter price in USD/bbl
<b>Oil Price (\$/GJ)</b>	This is a calculated value
<b>Fuel Type</b>	Choose "gas", "oil", "coal", or "renew" and the model will make the appropriate adjustments
<b>(gas, oil, coal, or renew)</b>	Note: if the "renew" option is chosen, the user can then input selected incentive parameters (see below under "Renewable Power Plants") For hybrid power plants choose "hybrid" option under renewable parameter settings
<b>Thermal Efficiency</b>	This parameter has been set to default levels already, but can be changed by the user
<b>Fuel Price Inflation</b>	Expected rate of increase in fuel prices in % per year

[Go Back to Parameter Sheet](#)

#### Financing

<b>Discount rate:</b>	Enter the rate, in decimal form, of the rate to be used when discounting the cash flows
<b>Term</b>	Enter the term of the financing in years
<b>IDC Rate</b>	Enter the interest rate to be used during the construction period
<b>Div Rate</b>	Enter the rate in decimal form, of the rate to be used for dividend payments to equity owners
<b>D/E</b>	Enter the proportion of the project to be financed using debt
<b>Interest Rate Adder</b>	Enter the points to be added or subtracted from the discount rate to derive the interest rate
<b>Tax rate</b>	Enter the corporate tax rate in decimal form
<b>Depreciation</b>	Enter the type for depreciation
<b>Depreciation Term</b>	Enter the depreciation term in years
<b>Inflation</b>	Expected change in price level in % per year
<b>Rev S.T. Escalation</b>	% of revenues subject to inflation at expected rate of price increase (simulates capital cost exclusion in PPAs)

#### Renewable Power Plants

<b>Grant</b>	Enter the proportion of the initial capital cost subject to a grant
<b>Tariff Type</b>	Enter the tariff type: "level" for a constant tariff level and "cost" for a main and secondary tariff keyed to the financing parameters
<b>Interest Rate Subsidy</b>	Enter the number of points by which the interest rate will be subsidized.
<b>Hybrid</b>	Enter the proportion of the electricity to be produced using fuel

#### Converter

<b>Foreign Exchange Rate</b>	Enter the foreign exchange rate in units per USD
<b>Name of Currency</b>	Enter the name of the currency

[Go Back to Parameter Sheet](#)

#### Avoided Cost Calculator

<b>Avoided Plant (gas, oil or coal only)</b>	Enter the plant type: "gas" "oil" or "coal"
<b>Avoided Investment</b>	do not enter anything in this cell
<b>O&amp;M</b>	enter a percentage
<b>Soft Costs (%)</b>	enter a percentage to cover non-EPC costs
<b>Pricing multiplier</b>	Enter a number (usually >1) to reflect the "Green Pricing" premium for the renewable energy

## **4. Risk Allocation and Negotiation Guidelines for ECB with Independent Power Producers**

### **4.1 Risk Allocation**

During Phase 1 study for the ECB, CORE identified several critical elements in the contractual relations between a Namibian transmission or distribution entity and a potential IPP developer. The purpose in Phase 1 was to (i) identify risks that impact on successful IPP development; (ii) categorize the risks according to importance, controllability and certainty; and (iii) devise mitigation strategies for key risk elements.

It was noted in the Phase 1 report to ECB that the *potential* to control a risk does not imply that the risk is either controlled at present or that a mitigation strategy exists. Sometimes a risk mitigation approach for specific project risks can be accomplished totally within the Namibian side of the project agreements. Often, however, the mitigation of risk involves the assignment of a risk in the overall project agreements to the party best able to bear it. This means that the ECB should approach the overall project agreements with a strategy as to how to assign risks properly. This will include the understanding that acceptance of risk, whether by ECB, NamPower or the project developer, will come at some cost to the party accepting that risk.

Different types of IPP projects carry differing risks for the main parties to the agreements, the ECB, NamPower and the developer. ECB and NamPower have had numerous consultations on the risk assessment approach. Exhibit 1.3 provides a copy of a risk assessment paper developed by NamPower. At the request of ECB, CORE reviewed the framework developed by NamPower and provided comments that are included in Exhibit 1.4 provides a summary of CORE's comments on the framework developed by NamPower.

### **4.2 Key Issues and options in IPP Negotiations**

Most of the focus in the analysis of IPP business negotiations falls on the Power Purchase Agreement (PPA). This focus is appropriate, since the PPA is the way that virtually all of the key cost and risk elements in the project are identified, assigned to various parties, and priced. However, the various project sub-agreements, listed below, also offer a backup for the parties so as to further specify and reinforce the risk allocation elements.

Key project sub-agreements include:

1. Fuel supply
2. Construction
3. Project implementation
4. Operations and maintenance
5. Land conveyance

In each of these agreements there exists the opportunity to specify (identify), assign, and settle on the appropriate price for each service or good provided in that agreement. Risk mitigation is a service, like other financial products, and must be priced.

## **Exhibit 1.3: Due Diligence and Risk Assessment Framework (Developed by NamPower)**



### **NAMIBIA POWER CORPORATION DUE DILIGENCE AND RISK ASSESSMENT FRAMEWORK**

#### **1. INTRODUCTION**

It is important that NamPower is not embarrassed or its credibility undermined by having advanced contractual discussions with an inappropriate party. The intention of the due diligence is to provide, and continue to provide, NamPower with sufficient assurance that the developer and relevant stakeholders are of good character and financially and technically capable of completing the project in its proposed form.

Consequently NamPower is establishing a due diligence process to assess proposals by independent power producers (IPPs) to develop new generation projects and sell power to NamPower. NamPower's roles in such project, if they proceed, are as:

- 1) Power purchaser;
- 2) Transmission services provider; and
- 3) Potentially, an investor in the project.

#### **Purpose**

The due diligence process is designed to assist decision making by assessing the potential risk of conducting business with a particular party. The purpose of the due diligence and risk assessment process is to make an objective assessment of the likelihood of the developer and associated parties being a reasonable party for NamPower to deal with from an ethical, legal, financial and technical perspective.

The due diligence process mainly focuses on the integrity and reputational aspects of contracting with an IPP developer. The result of the due diligence will be a view by NamPower of the risk it faces in entering into further discussions with the developer. If, in NamPower's view, the risk of involvement with the developer is high then NamPower may decline to continue discussions. Alternatively, NamPower may determine that the developer represents an acceptable risk but may require further assurance or checks before it ultimately considers contracting with the developer.

It is important to remember that the due diligence is only the first step in determining if NamPower will contract with the developer. The due diligence process will continue in some form throughout the period that NamPower is evaluating the IPP proposal and negotiating with the prospective developer. NamPower will have an opportunity to protect itself against various contractual problems through the contracts and the due diligence process is not intended to provide a full evaluation of the project itself or against other projects (The detailed project evaluation as described in Appendix 2, will only proceed if the developer progresses past the due diligence assessment).

**The due diligence is not a full evaluation of the IPP proposal and a positive outcome from the due diligence process does not necessarily mean that NamPower will contract with the developer.**

## **2. DUE DILIGENCE PROCESS**

The due diligence process is ongoing but there are two key points in the process:

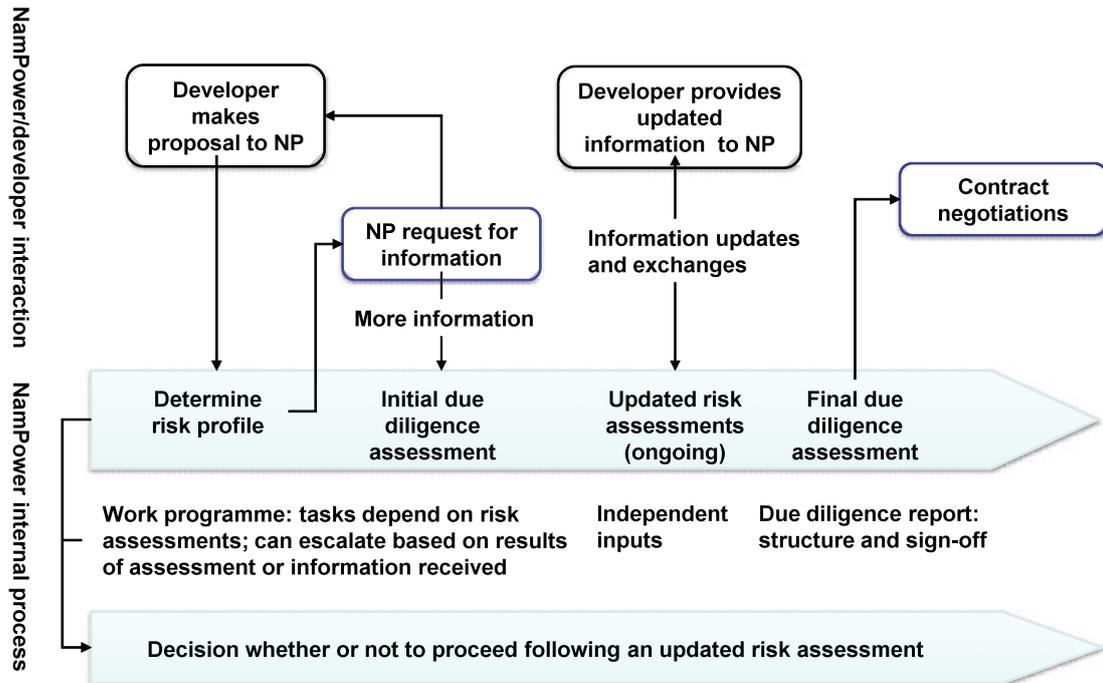
- 1) an initial due diligence, carried out when the proposal is in its feasibility stage; and
- 2) a final due diligence which, if the proposal meets all NamPower's due diligence criteria, is carried out immediately prior to entering into PPA negotiations.

The process is illustrated below, where there are ongoing processes of:

- 1) Application by developer
- 2) Initial Risk profile determination by NamPower
- 3) Information gathering by NamPower and exchanges of updated information between NamPower and the developer;
- 4) NamPower regularly updates its risk assessment based on results of testing or information received;
- 5) Each risk assessment by NamPower gives rise to a work programme that focuses on areas most at-risk and independent inputs are obtained as required;

- 6) Following each updated risk assessment, NamPower may make a decision on whether or not to continue with the developer's project.

## Due Diligence and Risk Assessment Framework



If the project passes all risk assessments, NamPower will produce a (final) due diligence report which will be signed off by management [and the NamPower Board of Directors] before proceeding to contract negotiations with the developer.

The due diligence work program and reporting should be the responsibility of an evaluation team headed by a senior manager. The evaluation team should have sufficient expertise to assess the risk areas identified. Where the team does not have sufficient expertise, independent opinions should be sought and the evaluation team should have sufficient expertise to evaluate the independent advice.

### Determine Risk Profile

The idea of the development of an initial risk profile by NamPower is that it determines the level of due diligence that should be undertaken. If a developer and development is determined to be low risk then a lower level of due diligence will be required to form an opinion about the suitability of that party to contract or otherwise with NamPower.

Once the result of the risk assessment is determined then the work due diligence programme must be equivalent or greater than that set down for that risk category. The risk assessment might ultimately result in an IPP proponent being deemed to be a lower risk than initially thought but the due diligence work programme cannot be less than that set down for the original risk classification.

In assessing the risk profile, we consider the risk to NamPower of involvement with the developer, other stakeholders and the project. The key criteria we assess are:

- Stakeholder suitability
- Financial Risk
- Project Profile
- Technical Risk

NamPower has developed a risk assessment approach based on the four categories above. In the table below draft categories for assessing the initial risk and the basis for allocating risk scoring to the IPP proponents are outlined. After this exercise is carried out the risk score is added up and a due diligence programme developed to match the perceived risk.

The outcome of the risk assessment is that the party is of low, medium, high or very high risk and the testing regime will be as set out in the table below.

Risk	
<b>Low</b>	We expect this party to be a reasonable counter party. Due diligence level is low PROVIDED no red flags emerge
<b>Medium</b>	We have some concerns about aspects of this party or project. A detailed due diligence is carried out to try to determine if there are any issues/red flags.
<b>High</b>	This is a risky party or project. We will carry out extensive due diligence and will need an extremely positive result to consider working with this counterparty
<b>Very High</b>	This party/project has a very high probability of causing problems for us. We will not get involved with this party at this stage.

If the result of a particular due diligence test is negative then this should be recorded and additional enquires/tests should be carried out to see if these results mitigate the findings of the first tests.

The following template is the risk profiling tool developed for NamPower's due diligence of potential IPP developers. The output from the risk profiles is a risk score. The risk score will determine which due diligence procedures should be carried out according to the table below.

#### Total Risk Score

Any 3 scores of 10 means developer is **rejected** for now

Any score of 10 in any test means we apply **high risk** due diligence procedures

Any total score of >20 means we apply **high risk** due diligence procedures

A total score from 15-20 means we can apply **medium risk** due diligence procedures

A total score < 15 means we can apply **low risk** due diligence procedures

## Risk Profiling Model Template

### Risk Assessment

Developer has applied to NamPower

#### Risk

Assessment	Low	Med	High	V High
Quantitative	1	2	4	10

### Stakeholder

Developer /corporate entity Standing

--	--	--	--	--

Major company Main stream experienced generation (incl. the type proposed) developer, good profile

Low

Minor company Main stream experienced generation (incl. the type proposed) developer or major company low generation (incl. the type proposed) experience, some significant regional project, good profile

Med

Some experience in generation (incl. the type proposed), no significant regional project

High

V High Never developed generation (incl. the type proposed) before

V High

Key Personnel

--	--	--	--	--

Experienced, No problematic Political connections, No Relevant Personal Issues

Low

Some Experience, No problematic Political connections, No Relevant Personal Issues

Med

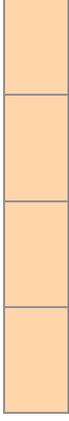
	<p>No Experience, No problematic Political connections, No Relevant Personal Issues</p> <p><b>High</b></p> <hr/> <p>No Experience, problematic Political connections, Significant Relevant Personal Issues</p> <p><b>V High</b></p>
Shareholding	<p>Listed /simple/transparent</p> <p><b>Low</b></p> <hr/> <p>Listed /complex/transparent</p> <p><b>Med</b></p> <hr/> <p>Private /simple/opaque/potential conflict of interest</p> <p><b>High</b></p> <hr/> <p>Private and or small/complex/Opaque/political investors/potential conflict of interest</p> <p><b>V High</b></p>
<b>Financial</b>	
Size of Project \$m	<p>N\$m</p> <p><b>Low</b> &lt;20</p> <hr/> <p><b>Med</b> 20-100</p> <hr/> <p><b>High</b> 100-500</p> <hr/> <p><b>V High</b> &gt; 500</p>
Size of Project \$m cf. company size	<p>compared to size of counterparty</p> <p><b>Low</b> &lt;5%</p>

Med 5-50

High 50-100

V High >100%

Counterparty \$



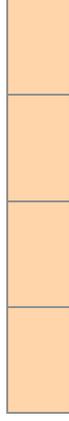
Low Major Company, Investment grade+ rating

Med Significant Company or small company Investment grade+ rating or Major company no rating

High Small company or significant company with no rating

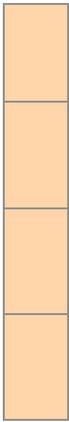
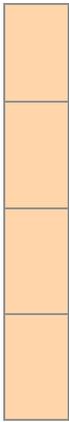
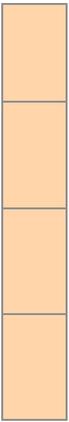
V High Individual

Counterparty Public Measures of Certified Credibility



Med external certification on best practices

High without certification

<b>Project Public Profile</b>	
Environment/Public Perception/Location	 <p> <b>Low</b> Green project/low controversy/easy location  <b>Med</b> Neutral project/some controversy/easy location  <b>High</b> Polluting project/some controversy/easy location /high controversy &amp; low pollutant  <b>V High</b> Polluting project/high controversy/city or environmental location </p>
<b>Technical</b>	
Type of Generation Plant and site/plant mix	 <p> <b>Low</b> Proven technology/international &amp; regional examples  <b>Med</b> Proven technology/regional or international examples  <b>High</b> Unproven technology/successful pilot plants  <b>V High</b> Unproven technology/1st time </p>
Size of Generation Plant	 <p> <b>Low</b> &lt;10 MW </p>

<b>Med</b>	10-100
<b>High</b>	100-250
<b>V High</b>	> 250

### **3. NAMPOWER REQUEST FOR INFORMATION**

The project developer shall provide NamPower with the documents identified in the risk assessment and may include:

- Pre-feasibility and feasibility studies of the project carried out by or for the developer;
- All draft project contracts between the developer and its technical advisers, suppliers, contractors and any other relevant parties;
- Drafts of any documents relating to funding arrangements made by the developer for the project;
- Developer's (and any other participants') financial accounts and shareholder details;
- Techno-economic and bank/funding models prepared by or for the developer to evaluate the project;  
and
- Any other reports, technical and background studies prepared by or for the developer relating to the project.

Where the developer is required to provide to NamPower a contract or document, if the contract or document has yet to be finalised NamPower requires the most recent draft of the contract or document and the developer's expectation of the final form of that contract or document. The developer will be required to keep NamPower informed as to the conduct of ongoing contract negotiations and updating of documents and to inform NamPower of any material changes to the expected final form of such contract or document.

The information provided should cover the following key areas outlined in Appendix 1.

At the close of this initial evaluation, NamPower will select a preliminary short list made up of the most attractive proposals. These selected proposals will move on to the second phase of the evaluation process for portfolio evaluation and additional due diligence based on the same five primary criteria. The portfolio evaluation is designed to assess the interaction and risk levels of the most promising resources and combinations of resources within NamPower's power portfolio.

Those proposals which provide the greatest benefit to NamPower's supply portfolio will be placed on the final short list for further discussion with the respondent(s). Such proposals may potentially move forward to negotiations of the terms and conditions of Definitive Agreements.

During this process NamPower will update its economic and risk evaluation on an ongoing basis until NamPower and the respondent might execute Definitive Agreements.

#### **4. DUE DILIGENCE ASSESSMENT: PROCEDURES AND RED FLAGS**

For the first phase of the evaluation, NamPower will evaluate the completeness of the information in order to determine whether the information received is of sufficient quality to allow a detailed evaluation to be carried out. NamPower will examine the information provided to determine whether they are complete, and whether all information requested has been provided and all documents have been signed of.

Due diligence procedures will be carried out to determine if there are any reasons that NamPower should not engage in potential contract discussions with an IPP developer applicant. After the risk assessment described above the due diligence procedures should be selected. The procedures are then carried out with the officer carrying out the due diligence looking for red flags.

##### **Procedures**

The following are recommended due diligence procedures to be carried out on prospective IPP developers. The procedures represent those due diligence procedures which should be carried out for every application to NamPower plus additional procedures which should be employed if the risk profile determines the developer has a greater risk profile than the minimum (low).

The Due Diligences Procedures Table which follows the list of procedures provides a guide on which procedures should be carried out for different risk assessments.

##### **Stakeholder Suitability**

In the due diligence of a particular proposal and its developer, the most important aspect is the suitability of the stakeholder (developer/project party/consortium) and their project as a counterparty with NamPower. Consequently, the most effort should be spent on determining the suitability of that stakeholder/developer group.

Some or all of the following topics should be considered:

- Qualifications, corporate membership of professional bodies: Verify authenticity from issuing body and if necessary cases verify authenticity of the issuing body itself, e.g. is there a qualifying requirement or does the member simply pay a joining fee for membership? Does the organisation exist as a registered place of study?
- Business references: Obtain independent confirmation concerning the potential associate's effectiveness, reputation, government or political relationships and integrity. If the potential associate has provided written references, verification should be obtained directly from the referee.
- Management skills and integrity should be assessed: Is the developer experienced in the technology and business and are they regarded as trustworthy.
- Official registry of organisations: Check ownership of companies etc., directorships, accounts and other relevant official documentation.

- Electoral records, local government business records, etc: Verify the associate is recorded at the address given.
- Criminal records: Check records for associate company and key management personnel or individual (if legally permissible in the country concerned).
- Court judgments: Check associate company and key management personnel or individual.
- Debarred or restricted parties lists: Check to see that the prospective associate or individual does not appear on any local, national or international listing of restricted parties or of organisations debarred from bidding (eg World Bank).
- Media search: The use of free and/or subscription databases to research the associate or an individual is recommended. If the associate or individual has a website, this should be examined, as should useful government sites such as anti-cartel or anti-fraud, etc.
- Local legal advice: If in-house advice is not available, a reputable local legal firm should be engaged to provide advice regarding the laws governing the relationship between the principal and the associate in the particular country concerned. Local attorneys can often assist in verification of local corporate registrations, or criminal or civil court records. Since this may result in considerable expense to the company, careful instructions and limitations of the scope of the work should be agreed in advance.
- Field work: Some information regarding associates may only be discovered via discreet and sensitive research carried out by qualified professionals. Considerable caution needs to be exercised when using others to conduct this research since it must be carried out ethically and legally. This may also result in considerable expense to the company. Careful instructions and limitations of the scope of the work should be agreed in advance.
- Does the developer and associated parties have adequate anti-corruption policies in place (management and Board members signed up to anti-corruption policies, transparent public tendering procurement processes, etc.)?

## **Financial Risk**

- Financial references: If audited financial records for the previous two years are not available, a third party financial referee may be requested to state the length of the relationship and provide an opinion of reliability, financial capabilities and probity.
- Credit rating: It is recommended that one of the reputable commercial sources be utilised (depending on the country involved) to check the credit rating for the associate or individual.
- Litigation search, to see if any action is being taken against the business or its key personnel
- Review of size and term of long term liabilities and extent of contingent liabilities
- How much have the key personnel personally invested (\$, % of total funds invested)?

## **Project Profile**

- Media Search: The results of a press search (including internet) linking Company (and associates and key personnel) and environment (specifically) and public consultation processes, and specific projects.
- Reference Site reviews: Contact stakeholders in reference sites to assess how well potential party managed stakeholder affairs particularly environmental affairs and public relations
- Debarred or restricted parties lists: Check to see that the prospective associate or individual does not appear on any local, national or international listing of restricted parties because of:
  - Activities involving harmful or exploitative forms of forced labour/harmful child labour, discriminatory practices, or practices which prevent employees from lawfully exercising their rights of association and collective bargaining.
  - Activities prohibited by host country legislation or international conventions relating to the protection of biodiversity resources or cultural heritage
  - Shipment of oil or other hazardous substances in tankers which do not comply with IMO requirements
- Media search for publicity concerning:
  - Activities within, adjacent to, or upstream of land occupied by indigenous peoples and/or vulnerable groups including lands and watercourses used for subsistence activities such as livestock grazing, hunting, or fishing
  - Activities within, adjacent to, or upstream of designated protected areas under national law or international conventions, sites of scientific interest, habitats of rare/endangered species, fisheries of economic importance, and primary/old growth forests of ecological significance
  - Activities which may affect adversely sites of cultural or archaeological significance
  - Activities involving involuntary resettlement
- Mitigation and Communication Plans: What stakeholder communication and issue mitigation plans do the developers have? If development has a high probability of causing concern amongst environmental or other public stakeholder groups this is critical.

## **Technical Risk**

- If NamPower is experienced with this technology then assign technical expert to review proposal and reference site information to determine whether technology and use of technology is “mainstream” or alternative. If NamPower is not experienced with the technology then an independent view should be sought.
- Reference Site reviews: Contact stakeholders in reference sites to assess the technical aspects of the power station development addressing particularly: completion time, capacity, and availability/reliability.

The following table gives an example of the testing required for different initial risk assessments.

## Due Diligence Procedures:

	Low Risk	Med Risk	High Risk	V High Risk
<b>Stakeholder suitability</b>		<p>Representation and warranty letter from Management and Board</p> <p>Minimum Internet search for information &amp; news</p> <p>For a Namibian company check company articles of association</p>	<p>Reference checking of credible parties including auditors etc.</p> <p>Review relevant project experience</p> <p>Review partner credibility</p> <p>Key personnel references</p>	<p>Formal comprehensive (independent?) report</p>
<b>Financial Risk</b>		<p>Representation letter from Management and Board</p> <p>Additional information about financing or financing partners</p>	<p>Due diligence on financial partners</p>	<p>Reject Applicant for now</p>

## Project Profile

Environmental/Public policy statement from Management and Board

High level value chain assessment of environmental risks

Mitigation plans

## Technical Risk

Representations and reference sites from management/board

Review all references at specific Site

If a small plant what is the R&D/pilot project status

## Red Flags

“Red flags” are results from due diligence procedures which raise questions. Red flags need to be documented and the recommended action recorded and followed up. A red flag may be a specific problem or simply a result or set of results which doesn’t seem right. The results of a red flag will either be further activity to clear the flag or ultimately an opinion on the effect of the red flag on the suitability of the IPP developer as a potential contracting party with NamPower.

## Red Flag Examples

The following are some examples of red flags which should raise concerns for the officer (s) carrying out the due diligence enquiries.

- A public official holds company shares or other interests in the company in *his own right*.
- A foreign official has recommended the applicant, particularly if that official has discretionary authority over the business at issue.
- An officer, senior executive or key employee of the company has an interest in another company that might be considered a competitor.
- An officer, senior executive or key employee of the company is related to an officer, senior executive or key employee of a company that might be considered a competitor.
- There are uncertainties in the business or financial references.
- The normal terms of business quoted by the company or individual differ to a material extent to local business terms and conditions.
- Payment instructions quoted by the company or individual include split payments, payments to an apparently unrelated third party, or to a bank account in an off shore tax regime.
- The company auditors have qualified the accounts produced by the applicant for reasons that are relevant to the application.
- There has been a criminal conviction of a current employee of the company for bribery, corruption or a similar criminal offence, or a civil action regarding bribery or corruption has been unsuccessfully defended by the company.
- There is a current or outstanding criminal case regarding bribery, corruption or a similar criminal offence, or a current or outstanding civil action regarding bribery or corruption, against a current employee of the company.
- The company or individual discloses previous involvement in insolvency proceedings.
- There is a significant difference between the remuneration rate quoted by the company or individual and local market rates for similar goods or services.
- The applicant advises that he is unable to sign a commitment to abide by all local and international laws regarding bribery and corruption or he is unable to sign a commitment that he cannot abide by the principal’s business ethics policy.
- The applicant requires that his identity, or if the applicant is a company, the identity of the directors, owners or employees, not be disclosed.
- Qualifications claimed by the company or individual are denied by the issuing body.

- The issuing body for the claimed qualifications is not a bona fide educational establishment or professional body, eg the company or individual can simply purchase the qualification without sitting examinations or proving standards of competency.
- The applicant is found to have had little or no experience in the industry concerned.
- There are significant variances between the written business references and the interview of the referees.
- Financial referees express reservations regarding the financial probity of the company or individual in question.
- Due diligence reveals, that the applicant is a shell company or has some other unorthodox corporate structure.
- The records from the official registry of companies do not agree with the information given by the applicant regarding ownership of the company, directorships or details in any of the other required official documentation filed regarding the organisation.
- The company or its immediate or ultimate holding company are registered in an off shore tax haven renowned for its lack of corporate or banking transparency.
- The owners and/or directors of the company are discovered to be nominees and the applicant refuses to disclose the real owners/directors.
- Electoral or local business records show a different location for the company or individual.
- An official body advises a criminal conviction and this conviction has not been disclosed by the individual. (Note: This information is not legally available in all jurisdictions).
- Official checks reveal a criminal conviction for bribery, corruption or a similar offence, or a civil action where the company or individual has unsuccessfully defended their actions and the applicant has not disclosed this case.
- Official checks reveal a current or outstanding criminal case involving bribery, corruption or a similar offence, or a current or outstanding civil action, which has not been disclosed by the applicant.
- A reputable credit agency has provided a poor credit rating on the company or individual or has advised previous liquidity problems not disclosed by the applicant.
- The individual or company appears on a list of those debarred from bidding on local, national or international contracts.
- Media searches reveal potentially damaging information regarding the applicant.
- Research work uncovers close associations with local or national politicians, potential competitors, criminal or political activists, etc.

## **5. DUE DILIGENCE REPORTS**

### **Due diligence opinion**

This is the opinion of the manager responsible for the due diligence work signing off their opinion on the suitability or otherwise of the IPP proponent as a business partner. The opinion should also be signed off by the [Managing Director or Board of Directors?] indicating agreement (or otherwise) with the opinion.

The due diligence opinion should state that:

- Based on the work performed;
- The opinion of the due diligence manager is either:
  - Satisfied that the IPP proponent and project meet NamPower's criteria for a potential PPA; or
  - Not satisfied that the IPP proponent and project meet NamPower's criteria for a potential PPA and the following additional evidence would be required to change that opinion:
- That the due diligence is ongoing;
- That the due diligence is not an evaluation of the project feasibility

### **IPP Description**

This section should describe the project under the following categories:

- The generation project: power station type, fuel type, location, MW, approximate cost
- The generation stakeholders: Ownership structure, EPC, OEM, Financier, other important stakeholders

### **A Summary of the work performed**

This summary should include all the information obtained and the findings of the review of that information. This section should include the following:

- Risk Assessment: level and rationale
- Primary Due Diligence Assessment: procedures, tests and results highlighting:
  - "Red flags"; and
  - Any omissions, rationale and alternative test carried out
- Any follow up due diligences work carried out: tests and results
- Any recommendations

## APPENDIX 1. INFORMATION CHECKLIST FOR THE PREPARATION OF A DUE DILIGENCE AND RISK ASSESSMENT

It indicates the type of information (project and company related) that should be provided by the developer to enable NamPower to assess its involvement and role in the project.

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (✓)
a)	General information on the developer and other participants in the project	Developer	<ul style="list-style-type: none"> <li>• Provide company profile including history and strategy</li> <li>• Ownership (major shareholding)</li> <li>• Confirm entities legal status,</li> <li>• Provide all relevant company information, memo and articles of association (including parent/holding company)</li> <li>• Provide details of corporate structure</li> <li>• Board of Directors profile</li> <li>• Contact details of key management</li> <li>• Professional history of key management</li> <li>• Other ownership or interest held by the counterparty, or key management or family</li> <li>• Describe the proposed or existing company in case of SPV, its capital structure, land ownership details, nature of major activities, , audited financial statements for the past five years or certified management accounts, bank references, etc.;</li> <li>• Financial evaluation of strength of developer, sponsor</li> </ul>	

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (v)
			<ul style="list-style-type: none"> <li>• Confirm whether the sponsors has the financial and resource capacity to deliver the project</li> <li>• Provide prior and current projects background, role, nature of involvement and result</li> </ul>	
	<b>Business / Financial References</b>	<b>Developer</b>	<ul style="list-style-type: none"> <li>• Provide at least two references from a reputable company who has done business with your company</li> <li>• Provide reference from a reputable financier who has provided finance to your company</li> <li>• Please indicate if you have any objection in NamPower contacting referee</li> </ul>	
b)	<b>Commercial Aspects</b>	<b>Project</b>	<ul style="list-style-type: none"> <li>• Provide production forecasts;</li> <li>• Provide detailed price structure, subsidies, rebates, import regulations, governmental involvement, etc.</li> </ul>	
c)	<b>Technical Aspects</b>	<b>Project and Developer</b>	<ul style="list-style-type: none"> <li>• Provide information supporting the technical feasibility of the proposal including independent engineers/technical experts reports</li> <li>• Grid code compliance, site investigations, strategies and programmes, resource assessment, O &amp; M policy, health &amp; safety and decommissioning</li> <li>• Provide details on technical, construction or other aspects of putting together the project, including the technical process, conceptual design and layout, the basis for its selection, suitability, relative costs, describe processes, rated capacity and anticipated output; and</li> </ul>	

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (✓)
			<ul style="list-style-type: none"> <li>• The envisaged detailed and/or existing key contractual arrangements.</li> <li>• Technical history of the applicant's experience with this technology including three reference sites and referee reports</li> <li>• Please indicate if you have any objection in NamPower contacting referee</li> </ul>	
d)	Infrastructure	Project and Developer	<ul style="list-style-type: none"> <li>• Provision of an overview of the adequacy and cost of power, communication, water and other utilities, as well as transportation facilities, including an estimation of possible installation delays</li> </ul>	
e)	Environmental Aspects	Project	<ul style="list-style-type: none"> <li>• A detailed description of the project's effect on the physical and social environment; including the possible requirements of resettlements of communities, as well as what project sponsors are doing to mitigate these effects; waste disposal systems. etc</li> <li>• EIA's and records of decision</li> <li>• Environmental management plans</li> <li>• Application for carbon credits.</li> </ul>	
f)	Organizational structure of project vehicle	Project	<ul style="list-style-type: none"> <li>• Provide the project's description and rationale;</li> <li>• Structure of the project vehicle, management structures, equity participation, etc. Board, Management and key operational units;</li> <li>• Information regarding the organization of the project construction and supervision, the determination and negotiation of cost, and the construction schedule;</li> <li>• Details of technical assistance or management contracts or other agreements;</li> <li>• Information regarding the availability of appropriately skilled workers who will be directly</li> </ul>	

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (v)
g)	Government's role, taxation, regulation, insurance, special incentives, etc.	Project	<p>involved on the project etc.</p> <ul style="list-style-type: none"> <li>Description of Government's role in the project, whether direct or indirect, as well as what the licenses, servitudes, permits and certificates are required and their current status;</li> <li>Indicate whether there are any investment incentives or privileges accorded to the project and any support for the project;</li> </ul>	
h)	Project Investment Cost and Financing Plan	Project	<ul style="list-style-type: none"> <li>Capital cost estimates, including land, buildings, earthworks, machinery, equipment, licensing, permanent working capital, interest during construction, and contingencies, allocate cost according to local and foreign currency requirements;</li> <li>The financing plan, including details of current shareholding structure, envisaged source of loan funds and loan conditions; and</li> <li>Proposed financing from [ ] including the anticipated disbursement schedule and rationale.</li> </ul>	
i)	Financial and Economic Evaluation	Project	<ul style="list-style-type: none"> <li>Projection of output, revenues, cost and profits at least for the duration of the PPA (<i>cost items should include raw materials, labour, power and other utilities, repair and maintenance, administration expenses, sales expenses, depreciation, taxes, etc.</i>);</li> <li>Complete financial evaluation of the project including computation of financial internal rate of return, profit and loss, balance sheet and cash flow for duration of the project, along with detailed assumptions; and</li> <li>Economic evaluation of the project, calculating the economic rate of return and stating the assumptions used ( substantiation of inputs and assumptions, sensitivities, key</li> </ul>	

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (N)
j)	<b>Risk and Safeguards</b>	<b>Project</b>	<p>value drivers, areas of risk, CAPEX, OPEX and forecast revenue(s))</p> <ul style="list-style-type: none"> <li>• Assessment of the risks involved in carrying out the project, including environmental considerations, regulation, construction, cost overruns, technology, schedule delays, government, and other factors, and proposed mitigation measures.</li> </ul>	
k)	<b>Management Representation</b>	<b>Developer</b>	<ul style="list-style-type: none"> <li>• Please provide a letter indicating: <ul style="list-style-type: none"> <li>○ That the management understand what the due diligence is for and why NamPower is doing it</li> <li>○ Details of any involvement by the business or member of management in any insolvency proceedings (whether current, past or future)</li> <li>○ Details of any involvement by the business or member of management in any criminal investigations or civil litigation</li> <li>○ Details of any criminal convictions by any member of management</li> <li>○ Confirmation that they have provided all information requested and that they are not aware of any other information that they should make known to NamPower that may be relevant</li> </ul> </li> </ul>	
l)	<b>Provide copies of the following</b>	<b>Project and Developer</b>	<ul style="list-style-type: none"> <li>a) Audited financial statements for the past five years;</li> <li>b) Copies of relevant legal documents e.g. Memorandum of Incorporation and Articles of Association;</li> <li>c) Maps;</li> <li>d) Rainfall/seasonal data</li> </ul>	

No	Topic	Level of information required /developer specific	Detail	Information available and provided for verification and analysis (N)
			<ul style="list-style-type: none"> <li>e) List of affiliated companies;</li> <li>f) Information on individual shareholders and managers;</li> <li>g) Detailed process, equipment or product descriptions;</li> <li>h) Financial schedules etc.,</li> </ul>	

## **APPENDIX 2: DETAILED EVALUATION**

The detailed evaluation is not part of the due diligence process; but is part of the overall evaluation of a potential IPP.

The detailed evaluation will be done in two stages: a) qualitative evaluation and b) quantitative evaluation based on weighting designed to reasonably compare proposals with diverse attributes. This process might require the use of various models and NamPower will have the right to obtain independent inputs from independent advisers in the evaluation of the technical, financial, environmental and commercial and legal risk assessment.

Qualitative analysis uses word form of descriptive scales – e.g. low, medium or high risk - to describe the magnitude of potential consequences and the likelihood that those consequences will occur.

Quantitative analysis uses numerical values for both consequences and likelihood using data from a variety of sources. The quality of the analysis depends upon the accuracy and completeness of the numerical inputs used. Consequences may be estimated by modelling the outcomes of an event or set of events, or by extrapolation from experimental studies or past data. Consequences may be expressed in terms of monetary, technical or human criteria.

Each proposal will be evaluated based on its compliance with this RFP (including the term sheet and contractual provisions exhibited to this RFP) and according to the following set of primary criteria:

- Compatibility with Resource Need
  
- Cost
  
- Risk Management
  
- Public Benefits
  
- Strategic and Financial Considerations

Each of the primary criteria is further delineated with sub-criteria as detailed in the checklist. Initially, proposals will be evaluated based on an individual proposal cost and on the qualitative criteria.

An evaluation committee may form one or more of the following working groups to assist it in its deliberations:

Quantitative Analysis (modelling)

Structuring and Pricing (Incl.. 3rd party engineering consultant as required)

Business & Commercial Issues

Environmental & Permitting

Transmission & Integration

Fuel Supply

Credit

Legal

Independent Evaluators (as required)

Financial

Technical

Environmental

Legal

Risk Management

Benchmark Team

Integrated Resource Planning Team

provides a shared resource for the evaluation and benchmark teams

After the final due diligence assessment the evaluation committee will make a recommendation to the Project Steering Committee which will in turn make a recommendation to the Board of Directors before the contract negotiations commence in earnest.

## Exhibit 1.4: Comments on NamPower’s Framework for Due Diligence

1. The general approach is sound, methodical and appropriate to the risks that must be evaluated by NamPower as an energy enterprise.
2. Obviously, ECB, as the regulator, will need to look at additional issues in terms of risks that go beyond what will be pertinent for an enterprise – risks to the economy and civil society at large.
3. The following are just a few issues with certain parts of the evaluation format and its priorities. With the inclusion of these items, we think that the overall NamPower approach can represent a good, systematic process.

Section/page	Suggested change or comment
<b>Sec 2, page 1</b>	<p>The purpose of the due diligence for NP should focus on the project as much as on the parties.</p> <p>Clearly, ECB’s due diligence will need to go beyond the treatment of risks to an enterprise as it will have to look at the impacts on the IPP on the national energy setting and the society at large.</p>
<b>Page 3</b>	<p>NP figure and explanatory text should assess consistency of proposed project with NIRP, variances to be examined more closely.</p> <p>The absence of an NIRP provides a limited basis on which a truly effective due diligence can be carried out as national priorities are missing when one does not have an approved and active NIRP in place.</p>
<b>Risk Profiling Template</b>	<p>The fuel supply agreement (FSA) is a key element of project risk. As we have seen, the absence of a good FSA allows the developers to change the project specs without consequence. NP should insist on receiving a copy of the FSA as part of its due diligence process for any IPPs that it considers.</p>
<b>Sec 5, page 9</b>	<p>NP should insist that the project sponsor provide information in the format required by the ECB data template, including the financial and economic data.</p> <p>This is important, as it will synchronize the economic and financial evaluation of the IPPs between NamPower and ECB. To the extent possible, ECB and NamPower should align their due diligence process in those areas that provide clear opportunities for doing so. This way, the IPP due diligence process will be smooth and efficient and minimize potential disagreements between the parties.</p>

Section/page	Suggested change or comment
“Red Flags”	Inconsistency with NIRP should be noted as a potential red flag and the project sponsors should be required to address the reasons that their project will benefit NP and Namibia regardless of the fact that the country currently does not have an NIRP.
Appendix 1	<p>Information checklist should be cross-referenced with ECB data requirements for consistency of format and content.</p> <p>This is very important and underscores the need for a single message and a common set of information and procedures for prospective IPPs. This is precisely what we discussed on July 21 in our meeting with NamPower.</p> <p>This is also what is included in the Terms of Reference for the ECB-NamPower IPP Working Group.</p>

At the initial stage of risk identification, it is critical for the ECB to understand that a given risk must be dealt with consistently throughout the project agreements wherever it appears. Otherwise, a further project risk, inconsistency and lack of clarity about risk assignment and responsibility will be created. Such a lack of clarity and consistency can easily lead to disputes among the parties, with costly litigation or arbitration a likely byproduct.

The specific project agreements listed above form the basis of a solid approach to identifying, mitigating and pricing risk. For large projects the PPA should be considered a framework that reflects the detailed negotiations in the various project agreements. The alternative approach, useful for smaller projects, is to negotiate the PPA first and then allocate the specifics to the various project agreements.

The following section shows how the risk allocation might occur for different projects.

### **4.3 Risk Identification, Allocation, Mitigation, and Pricing: Key Project Agreements**

#### **4.3.1 Fuel Supply Agreement**

Fuel Supply Agreements (FSAs) are a critical element of any IPP project and often require careful orchestration and extensive negotiations. Only when the FSA is largely specified, can the sponsors and the customers for the power have some confidence that the cost and price terms laid out in the application and feasibility study will be realized. Apart from the usual clauses related to the roles and responsibilities of the parties, the following specific clauses are common to most FSAs:

The following general clauses are of key interest in FSAs:

1. Term of the Agreement
2. Termination and Cancellation Conditions and Procedures

3. Conditions Precedent - requirements for buyer to have financing and facilities for fuel receiving and storage
4. Source of Fuel and Fuel Supply
5. Substitute Sources
6. Delivery Procedures, Schedules, and Guarantees
7. Default Clauses and Penalties
8. Quantities of Fuel Supply
9. Fuel Storage and Security
10. Insurances
11. Prices, Currency, and Exchange Rates
12. Force Majeure

As Exhibit 1.5 shows, these terms will be negotiated very differently for different types of Projects. For wind projects, there will be no FSA, and all of the risks that are identified and mitigated in the FSA, especially sections 4-7, will need to become parts of the O&M agreement.

<b>Exhibit 1.5: Fuel Supply Agreement Issues For Namibian IPP Projects</b>				
<b>Issue</b>	<b>Large Projects</b>		<b>Small Projects</b>	
	<b>Coal</b>	<b>Gas</b>	<b>Market Fuel</b>	<b>Biomass Fuel</b>
Term of the Agreement	Normally congruent with PPA	Congruent with PPA, if dedicated source, otherwise not specified if for spot LNG	Same as gas IPPs	Need dedicated source for life of PPA
Termination and Cancellation Conditions and Procedures	Standard clauses specified by both parties	Standard clauses specified by both parties	Standard clauses specified by both parties	Cancellation only for force majeure events
Conditions Precedent - requirements for buyer to have financing and facilities for fuel receiving and storage	Essential	Essential	Important – may be supplied by local distribution system	Essential
Source of Fuel and Fuel Supply	Specified in FSA	May be specified if dedicated gas source, otherwise LNG may be on “supply from anywhere” basis	Local distribution or supply from anywhere	Specified in FSA
Substitute Sources	Specified, with liquidating damages	Specified, with liquidating damages for dedicated source or specify terms for non-delivery if short term contract	Specify terms for non-delivery if short term contract	Specified, with liquidating damages
Delivery	Specific, as to	Specific, as to	If IPP on local	Will be

Procedures, Schedules, and Guarantees	schedule and volumes	schedule and volumes, does not apply to spot purchases	distribution system, then no distribution procedure needed, if not then same as gas	responsibility of IPP to arrange
Default Clauses and Penalties	See substitutes	See substitutes	See substitutes	n/a
Quantities of Fuel Supply	Specific, as to volumes	Specific, as to volumes	Specific, as to volumes	Specific, as to volumes
Fuel Storage and Security	Responsibility of IPP	Responsibility of IPP	Responsibility of local supplier	Responsibility of IPP
Insurances				
Prices, Currency, and Exchange Rates	Set for term of contract, with appropriate adjustment mechanisms	Formula agreed to for term of contract	Formula agreed to for term of contract	Price specified for term of contract, with appropriate adjustments

As the exhibit shows the key differences between larger IPPs and smaller ones is that the fuel suppliers have differential supply obligations. For the larger projects, it is up to the supplier to find substitutes in case of delivery failure; otherwise the IPP will receive compensation if it is forced to find and acquire substitutes. For renewable IPPs there is no realistic way to force liquidating damages payments on small farmers, so the supply substitute obligation will be on the IPP.

Pricing adjustment clauses will similarly vary from one type of project to another. In particular, a coal project is expected to provide relatively constant prices throughout its life, adjusting for foreign exchange risk and with some adjustments for fuel market events. Gas will tend to be entirely adjustable according to world markets. Biomass prices should be fixed in real terms for the life of the project, in line with the pricing terms of the PPA.

#### **4.3.2 Construction Agreement**

The construction agreement needs to be the next agreement negotiated. This agreement will ensure that the plant operates as envisioned in the application and feasibility study and that it can be built for a price that is acceptable to both the project developer and the end customer for the electricity.

Key elements of the construction agreement include:

1. General Provisions
2. Details and rights of the Employer
3. Details and rights of the Contractor
4. Design – for EPC contracts only
5. Staff and Labor
6. Plant, Materials and Workmanship
7. Commencement, Delays and Suspension
8. Completion and Testing
9. Defects Liability
10. Variations, Adjustments

11. Contract Price and Payment
12. Termination and Suspension
13. Risk and Responsibility, Insurance

Most of the terms of the construction agreement do not vary much according to the type or size of plant. However, several important considerations must be kept in mind for key elements of the construction agreement. Exhibit 1.6 details key issues for ECB.

<b>Exhibit 1.6: Key Issues in Construction Agreements</b>				
<b>Issue</b>	<b>Large Projects</b>		<b>Small Projects</b>	
	<b>Coal</b>	<b>Gas</b>	<b>Market Fuel</b>	<b>Biomass Fuel</b>
Design	Important if project uses EPC contract; compliance with environmental regulations must be specified at this stage	Important if project uses EPC contract	Project expected to use EPC contract, design to be specified by sponsor	Project expected to use off-the-shelf components, design should be relatively standardized; operator training terms & conditions specified here
Plant, Materials and Workmanship	Standard clauses specified by both parties; lays out intellectual property conditions for supercritical plants	Standard clauses specified by both parties	Standard clauses specified by both parties	Specify rights of rejection and/or cancellation in event inferior equipment or workmanship provided by EPC contractor
Commencement, Delays and Suspension	Potential for delays significant; ECB should monitor progress	Buyer must monitor progress	Terms should be standard for large industrial plants	Most likely to be affected by delays and suspensions, terms should be specified for both parties
Completion, Tests	Sponsor expected to assume lead role in negotiations; ECB role to ensure that standards are complied with for emissions	Sponsor expected to assume lead role in negotiations; ECB role to ensure that standards are complied with for emissions	Responsibility of sponsor	ECB to play role in monitoring completion & testing
Defects, Liability	Responsibility of sponsor to negotiate	Responsibility of sponsor	Responsibility of sponsor	Responsibility of company and regulator
Variations and Adjustments	Responsibility of sponsor to negotiate, performance (i.e., emissions) problems bring in ECB concerns	Responsibility of sponsor to negotiate	Responsibility of sponsor to negotiate	Standard responsibility, should be specified by master design and EPC

Contract Price and Payment	Responsibility of sponsor to negotiate	Responsibility of sponsor to negotiate	Responsibility of sponsor to negotiate	Should be specified in master design
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For the most part the ECB will need to monitor progress at coal-fired plants for environmental compliance and variations. Its other key role will be in the design for small renewable energy plants. In this regard, ECB should probably consider hiring an owner's engineer to represent the interests of ECB and the RED purchasers or electricity from such generators.

### 4.3.3 Project Implementation Agreement

The key implementation agreement is the PPA. The nature of the PPA will vary by type of project. Exhibit 1.7 provides a listing of the roles for ECB according to different types of projects:

<b>Exhibit 1.7: Key Issues in Project Implementation Agreements</b>				
<b>Issue</b>	<b>Large Projects</b>		<b>Small Projects</b>	
	<b>Coal</b>	<b>Gas</b>	<b>Market Fuel</b>	<b>Biomass Fuel</b>
Standardization	Not advisable, role of ECB is oversight to monitor congruence with tariff	Not advisable, role of ECB is oversight to monitor congruence with tariff	Critical – role of ECB is to provide standard template with prices, adjustments, sales terms all specified	Critical – role of ECB is to provide standard template with prices, adjustments, sales terms all specified, payment for capacity, if any to be specified in this agreement
Adjustments to Price	ECB will provide template for negotiations & insist on compliance with price adjustment terms in tariff regulations	ECB will provide template for negotiations & insist on compliance with price adjustment terms in tariff regulations	ECB will provide template for negotiations & insist on compliance with price adjustment terms in tariff regulations	ECB will provide cost-based pricing mechanism (for biomass) or standardized wind/water rights scheme for other projects
Tendering Process for IPPs	ECB & NamPower to coordinate	ECB & NamPower to coordinate	Unsolicited bids permitted, ECB to determine maximum size & terms of capacity payments	ECB to issue periodic tenders for capacity, specifying technology or fuel
Dispute Resolution	ECB helps to establish which disputes are resolvable locally and which ones involve international arbitration	ECB helps to establish which disputes are resolvable locally and which ones involve international arbitration	ECB prepares dispute resolution template to take care of most issues domestically	ECB prepares dispute resolution template to take care of almost all issues domestically; exceptions include manufacturer's defects, spare parts defects

The implementation agreements should summarize the rights and responsibilities of the various parties. The ECB strategy in large projects must be to ensure that the public interests that it represents and the public policies that it is obliged to implement are part of the agreements from the beginning. In this sense, ECB will need to set some framework conditions at the beginning of each IPP contract negotiation. These framework conditions should be consistent with the initial bidding and document requirements for a project to receive a preliminary license from the ECB.

For smaller projects the ECB will need to be more pro-active, controlling both the pace of the industry expansion and the legal terms and conditions for the implementation agreements. CORE has suggested that the ECB provide standard contract templates for these smaller projects, differentiated by technology and fuel type.

#### **4.3.4 Operations and Maintenance Agreements**

There is generally a small role for the ECB in this set of agreements. For coal-fired plants, the ECB's interest in O&M involves emissions controls primarily. A secondary interest will be the definition of force majeure events. For smaller plants, the ECB's main interest will be in assessing the success of the operators in maintaining a high level of generation.

The definition of force majeure takes on additional importance where there is a renewable energy source, especially wind or run of river hydro. In such cases, the ECB will want to work with its technical experts to define conditions of non-generation that may be extraordinary, as opposed to "regular" fluctuations in wind speeds or water flow.

#### **4.3.4 Land Conveyance Issues**

Most of these issues will not be of concern to ECB.

### **5. Other Support Activities**

In addition to the activities described above, CORE International, Inc. provided additional support to ECB in order to advance the process of IPP due diligence and the role of various parties. Specifically, these included the following:

- **Comments on NamPower's Paper on the IPP Process:** Annex 5 includes the comments that the CORE Team provided on the paper on the IPP Process developed by NamPower.
- **Terms of Reference for the IPP Working Group:** In order to facilitate the IPP process, CORE recommended that ECB initiate the process of a high-level IPP Working Group. Annex 6 includes Draft Terms of Reference for the proposed IPP Working Group.

### **6. Summary**

An approach to contract negotiations, properly conceived, should permit the ECB to reduce the overall level of uncontrolled risk in an IPP project. CORE has suggested that there are various points of entry in the individual project agreements that will permit effective risk mitigation for various classes of project risk.

Exhibit 1.8 shows how the negotiating strategies identified above will help to mitigate various IPP risks.

<b>Exhibit 1.8: Contributions by ECB to Mitigating IPP Project Risks</b>	
<b>Risk</b>	<b>Recommended Role of ECB</b>
Fuel Prices	Adjustment according to tariff periods for large projects, fixed real prices in renewable projects
Fuel acquisition currency risk	Fixed in FSA, rather than PPA
Plant design	Environmental parameters fixed at design stage by ECB for large plants; possibility of standardized design for smaller plants
Inappropriate design or materials	ECB has role at beginning of process; for smaller plants ECB can promote plant completion by hiring owner's engineer
Tendering	ECB can specify most of the essential information to be furnished in a form that indicates whether a company is (i) competitive financially; (ii) acceptable environmentally; and (iii) willing to accept ECB tariff provisions
Price Adjustments	ECB provides template for larger projects that must be incorporated into PPA. For smaller projects ECB specifies price and adjustment methods precisely.
Dispute Resolution	ECB helps to define appropriate fora for dispute resolution. ECB should provide precise forum in case of small renewable energy plants.

A good strategy for ECB in project negotiations involves (i) preventing unqualified bidders from participating in the process through information and disclosure requirements; (ii) conforming pricing adjustments to the country's tariff process, thereby preventing the primary cause of PPA failure; and (iii) keeping disputes about small power plants within the country.

## **ANNEX 2: MATERIALS FOR COURSE 1 IPP DUE DILIGENCE PROCESS AND RELATED ISSUES**

The materials for this course in hard copy as well as a CD-ROM were provided to each participant in the course and were also submitted to the ECB as interim deliverable. In order to keep the size of this report manageable these materials are not reproduced here but are incorporated by reference.

All course materials will be included as a separate annex in the Final Report for this Technical Assistance project.

## **ANNEX 3: MATERIALS FOR WORKSHOP 2 REGULATORY GOVERNANCE IN THE IPP PROCESS – LESSONS LEARNED**

The materials for this course in hard copy as well as a CD-ROM were provided to each participant in the course and were also submitted to the ECB as interim deliverable. In order to keep the size of this report manageable these materials are not reproduced here but are incorporated by reference.

All course materials will be included as a separate annex in the Final Report for this Technical Assistance project.

## **ANNEX 4: LIST OF PARTICIPANTS FOR BOTH WORKSHOPS**

ECB decided to open the workshop to officials from various other entities in Namibia involved in the IPP process. These included the Ministry of Mines and Energy, Ministry of Finance, NamPower, Namcor, and others. A complete list of participants follows.

**LIST OF PARTICIPANTS**  
**IPP REGULATORY GOVERNANCE WORKSHOP**  
**WINDHOEK, NAMIBIA**  
**(Updated after the Workshop)**

<b>S. No</b>	<b>Name &amp; Designation/ Title</b>	<b>Organization, Address</b>	<b>Contact</b>
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03	<b>Mr. Gerrit W Clarke</b> Manager: Regulatory Support Services	Electricity Control Board	Tel: Fax: Mobile: Email:
04	<b>Ms. Helene Vosloo</b> Manager: Economic Regulation	Electricity Control Board	Tel: Fax: Mobile: Email:
05	<b>Mr. Robert Kahimise</b> Financial Analyst	Electricity Control Board	Tel: Fax: Mobile: Email:
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07	<b>Mr. Francois Robinson</b> Tariff Analyst	Electricity Control Board	Tel: 264 61 374 319 Fax: 264 61 374 304 Mobile: 264 811271715 Email: frobinson@ecb.org.na
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13	<b>Mr. David Jarrett</b> Senior Engineering Technician: Renewable Energy	NamPower	Tel: 61 205 2782 Fax: 61 205 2246 Mobile: 081 356 9120 Email: david.jarrett@nampower.com.na
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15	<b>Mr. Christoph Aimwata</b> Senior Finance Manager	NORED	Tel: Fax: Mobile: Email:
16	<b>Mr. Alastair Baumann</b> Exploration and Production Deptt.	Namcore	
17	<b>Mr. Mario Peterson</b> Exploration and Production Deptt.	Namcore	
18	<b>Mr. Shadreck Mwilima</b> Public Relations Officer	ECB	Tel: +264 61 374 311 Fax: 264 61 374 305 Mobile: 264 811288359 Email: <a href="mailto:smwilima@ecb.org.na">smwilima@ecb.org.na</a>

**LIST OF PARTICIPANTS**  
**IPP DUE DILIGENCE WORKSHOP**  
**WINDHOEK, NAMIBIA**  
**(Updated after the Workshop)**

<b>S. No</b>	<b>Name &amp; Designation/ Title</b>	<b>Organization, Address</b>	<b>Contact</b>
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# ANNEX 5: COMMENTS ON THE PAPER ON IPP PROCESS DEVELOPED BY NAMPOWER

## 1. Context

NamPower had developed and submitted two papers on the issues related to integrating IPPs into Namibia's Electricity Supply Industry (ESI). These papers are as follows:

1. Guide for Independent Power Producers in Namibia
2. Incorporating IPPs into the Namibian ESI

NamPower shared these papers with the Electricity Control Board (ECB) for their views and comments. ECB, in addition to its own review, requested CORE International, its current Consultant in IPP issues in Namibia, to review these papers and provide any comments that may be useful both the ECB and others in Namibia as the country moves forward with promoting the deployment of IPPs in Namibia's electricity market. Specifically, ECB requested CORE to review these documents from an external perspective and from the perspective of a prospective IPP project developer. This is because ECB wants to make sure that the information developed and made available to prospective IPP developers and the stakeholder community is consistent with Namibia's not only consistent with the prevailing Laws and Regulations but is also clear, consistent, user-friendly, and comprehensive.

In order to further facilitate the process of this review, ECB and NamPower convened a meeting on July 21 to discuss the entire IPP process in detail. CORE International participated in this meeting and ECB has developed and forwarded the minutes of this meeting to NamPower for review and comment.

In addition, both ECB and NamPower have agreed to establish an ECB-NamPower IPP Working Group (The Working group) with the express objectives to (i) develop and finalize a comprehensive IPP Process Document and (ii) develop a collaborative process between the two entities to work together to encourage the development of IPPs in Namibia while preserving their independent statutory mandates, responsibilities, and authorities. CORE International has drafted the Terms of Reference (TORs) for the Working Group and submitted them to the ECB for consultations with NamPower and for the parties to finalize the TORs and for the Working group to begin the important work of developing and single IPP Process for Namibia

Furthermore, during the meeting, the ECB and NamPower agree to address other key issues that include (i) development of an NIRP, (ii) development and finalization of a Grid Code, and (iii) resolution of NamPower's request for NamPower to be officially established as a Single Buyer.

Some of the comments provided here are also included in the Minutes of the Meeting prepared by the ECB on the ECB-NamPower meeting held on July 21, 2008.

## 2. CORE International's Comments on the IPP Papers Prepared by NamPower

CORE International has reviewed the two papers developed by NamPower on issues surrounding the IPP process in Namibia. CORE's general comments on these two papers are as follows:

- Both of the papers are quite useful for discussion and debate among Namibian officials with background in the energy sector and demonstrate consider thinking and basis for the ideas and recommendations proposed therein. They both need considerable work to take them to the next stage so that they can (i) serve as

operating documents for the ECB and NamPower and (ii) be used to develop a detailed “IPP Process Information Package” for the prospective IPP community and the public. This is the centerpiece of the Terms of Reference developed for the ECB-NamPower IPP Working Group.

- The paper entitled “Guide for Independent Power Producers in Namibia” provides information for prospective IPPs who may be interested in building new power stations in Namibia. It addresses issues such as (i) statement of opportunities, (ii) connection agreement, (iii) power purchase agreements (PPAs), (iv) generation license, (v) grid code, and other details. It should be noted that ECB has also developed considerable information for IPPs related to application and licensing requirements and posted it on its web site. In this regard, several issues need to be considered and agreed to between the ECB and NamPower. At a minimum, these include the following:
  - The need for a single piece of information (not two or three different pieces from the ECB, NamPower, or the Ministry of Mines and Energy) needs to be developed with input from all parties. This is crucial as the IPP industry and the public should be provided a single message in order to avoid confusion and streamline the process of promoting IPP development in the country.
  - The Ministry of Mines and Energy and the government policies have vested the responsibility and authority for managing this function related to the development of IPPs with the ECB. Therefore, the ECB should take the lead to finalize and publish the “IPP Information and Guidelines” on its website regardless of the parties involved in the development of this document. Clearly, NamPower will have an important contribution to both the development and the finalization of this document.
  - In this regard, the Working Group should integrate all of the information related to guidelines for IPPs developed by the ECB and NamPower and produce a single document to be posted on the ECB website as the final policy and information guideline for prospective IPPs. This document should be visited periodically for updates based on input from all energy sector stakeholders.
  - Just as the responsibilities and authorities of ECB as the national electricity regulator should be recognized and respected by all parties, the right of NamPower as an electricity market player, should also be respected in that NamPower, as the buyer of the electricity from any IPPs, has the right to engage prospective IPPs for any discussions that may suit NamPower and a potential IPP. However, such discussions and NamPower and any prospective IPPs need to be in the context of a single IPP policy and procedure in the country.
  - The NamPower “Guide for Independent Power Producers in Namibia” date March 10, 2008 also includes discussions on technical subjects such as transmission tariff methodology, grid code, power purchase agreements, due diligence process, connection terms, etc. While some of the discussion on these issues in the Paper is consistent with the point of view of an enterprise

or a market player, and serves the interest of the same, it is important that before such papers are released to the public or prospective IPPs, ECB and NamPower agree on all of the procedures to ensure a single message is given to the IPP industry.

- The Paper does not include a lot of other information that a prospective IPP developer would need in order to make decisions with respect to its potential interest in Namibia's power industry. In this regards, it should be emphasized that the overall goals of the Namibian government with respect to encouraging the entry of IPPs in the Namibian electricity market will be compromised if ECB and NamPower proceed independently, without consultation, and give their own respective messages to the prospective IPPs.
  - Extensive collaboration between ECB and NamPower is even more crucial in the absence of an NIRP as decisions will need to be made in terms of specific technologies and especially renewable energy with respect to the best interest of the country.
  - As a final point, it is recommended that this paper, along with all of the current information related to IPPs on the ECB website be integrated into a final document which should be agreed to between the ECB and NamPower. This final document should then be circulated for public comments and consultation and finalized.
  - Once finalized, this document should be the sole and single piece of information on Namibia's IPP plans and procedures and should be posted on the ECB website. On issues related to technical procedures such as connection agreements or PPA requirements, NamPower may prepare and publish its own information on its website to provide the prospective IPPs with further details. However, it is strongly recommended that before any such information is released to the public and prospective IPPs, NamPower and ECB should consult with each other and arrive at an agreement. This approach should form the core of the ECB/NamPower collaborative process, as it will, most certainly, avoid confusion in the public as well as within the IPP producer community.
- The paper entitled "Incorporating IPPs into the Namibian ESI" prepared by NamPower is a Power Point Presentation which discusses a variety of issues related to (i) the IPP Process, (ii) NamPower's Contractual Arrangements, and (iii) Fine-tuning the Grid Code. CORE's specific comments on this document are as follows:
    - The IPP Process proposed by NamPower in this Power Point Presentation is a mix of NamPower's own interests as a market player and those of ECB as the regulator. These interests need to be synchronized and harmonized through discussions between the parties under the auspices of the Working Group. Once again, the principle that these deliberations should be driven by is that there should be a **single** IPP Process and it should be **led** by the ECB as per the statutory authority of the ECB. In addition, since NamPower is both a "player" and a "market participant", it is important for NamPower to

avoid any perceived or real conflicts of interest in its own desire to be an important entity in the development of the IPP industry in Namibia.

- Clearly, there will be a second part to the IPP process, which relates to ongoing consultations between the ECB and NamPower on specific IPP proposals. While these consultations are encouraged, both parties must respect the confidentiality of the information that may be submitted by prospective IPPs as part of the IPP license application requirements. Furthermore, such consultations should be carefully carried out to avoid NamPower being seen as influencing the ECB licensing application review process, which must remain independent.
- The second part of the Power Point Presentation discusses a variety of contractual arrangements and due diligence activities that NamPower will rightly need to be involved in as part of any negotiations that it may enter into with a prospective IPP as the buyer of electricity from that IPP. ECB, at all times, needs to recognize and respect that such consultations and negotiations are the business of the parties involved (market players). At the same time, NamPower should recognize and respect that the process of reviewing an IPP license application is solely the business of the ECB and needs to be carried out in an independent and transparent manner. That said both parties would significantly benefit by carefully guarded consultations during the process of review of an IPP application as this will make the process more efficient and avoid downstream confusion or conflicts.
- The third part of the Power Point Presentation addresses the fine-tuning of the Grid Code. ECB and NamPower agreed during the July 21, 2008 meeting that a separate Working Group (possibly a subset of the ECB/NamPower IPP Working Group) would address this issue and move towards the finalization of the Grid Code.
- The last part of the Power Point Presentation includes a number of recommendations from NamPower to ECB. These recommendations are well thought out and need to be discussed in working sessions of the Working Group to arrive at final agreements between the two parties. Once again it should be stressed that the two parties need to recognize that despite extensive consultation that is recommended, certain functions are reserved onto each party as the lead. For example, the function of IPP license application review and decision-making is reserved onto ECB by statute. At the same time the functions related to technical and operational agreements such as the PPA, transmission connection, and related performance conditions for a particular IPP project, are reserved onto the parties involved (NamPower and the prospective IPP). However, since ECB is the final authority for recommending the rejection or issuance of a license to an IPP applicant, NamPower must recognize that to the extent it enters into its own agreements on technical and operational matters with an IPP applicant, it should do so consistent with the overall IPP license application review requirements in order to assist ECB in its review and decision making process. A specific example for this would be the PPA negotiated between NamPower and the IPP applicant. If such a PPA is negotiated based on the

criteria used by ECB for the review of PPAs, the probability of a downstream disagreement that may either delay or derail a license to the applicant will be minimized.

During the meeting on July 21, 2008, it was discussed that CORE International will provide a format which may serve as a guide to the ECB-NamPower IPP Working Group to deliberate on many of these issues, particularly with respect to agreeing on which entity takes the lead for what specific actions and items and which areas need extensive consultation between the parties. Exhibit 5.1 below provides a simple format that will assist in getting the work of the Working Group started. As the IPP Working Group makes progress, this format could be expanded and further refined.

**EXHIBIT 5.1: PROPOSED FORMAT TO AID THE ACTIVITIES OF THE ECB-NAMPPOWER IPP WORKING GROUP**

**NOTE: THIS IS A FORMAT AND NEEDS TO BE EXPANDED AND FILLED IN DURING THE FIRST MEETING OF THE ECB-NAMPPOWER IPP WORKING GROUP.**

**THIS IS A WORKING DOCUMENT AND IS LEFT INTENTIONALLY BLANK TOWARDS THE END.**

NO.	AREA OF ACTIVITY AND SUB-ACTIVITIES	LEAD RESPONSIBILITY AND AUTHORITY	AREAS REQUIRING EXTENSIVE MUTUAL CONSULTATION
1.	<p><b>IPP LICENSING APPLICATION GUIDELINE AND REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• General Information to Prospective IPPs</li> <li>• Pre-Application Issues</li> <li>• Application Format</li> <li>• Various Requirements for Documents to be Submitted with the Application</li> <li>• Fuel Supply Agreement</li> <li>• Agreed-to PPA</li> <li>• Financial Analysis and Financing Plan</li> <li>• Technical Feasibility of the Project</li> <li>• Proof of Site Acquisition and Permits</li> <li>• Environmental Considerations of the proposed Project</li> <li>• Financial Strength and Track</li> </ul>	ECB	Extensive consultation is needed between the ECB and NamPower on various details

	Record of the Applicant		
2.	<b>IPP APPLICATION REVIEW PROCESS</b> <ul style="list-style-type: none"> <li>• Criteria for IPP Application Review and Record Keeping</li> <li>• Check List for Initial Screening of the Application and Documentation of Incomplete Compliance with Requirements</li> <li>• Safeguarding Commercially Sensitive and Proprietary Information Submitted by the Applicant – Chain of Custody</li> <li>• Record-keeping of Reviews of Application</li> <li>• Standard Forms for Evaluation of Applications and Documentation</li> <li>• Standard Format for Recommendation to the Minister</li> <li>• Standard Form for the Decision by the Minister</li> <li>• Appeals Procedure</li> <li>• Other relevant Information</li> </ul>		
3.	<b>NIRP DEVELOPMENT</b>	ECB	Extensive input from NamPower in the process of developing the NIRP including technical details
4.	<b>FINE-TUNING OF THE GRID CODE</b>		NamPower to provide specific comments and work with the ECB to finalize the Grid Code based on the existing Draft
5.	<b>MARKET MODEL AND THE REQUEST BY NAMPOWER TO BE OFFICIALLY DESIGNATED AS A SINGLE BUYER</b>		

6.			
7.			
8.			
9.			

# ANNEX 6: DRAFT TERMS OF REFERENCE FOR THE PROPOSED IPP WORKING GROUP

## 1. Background

The Electricity Act 2007 promulgated in November 2007 cleared the way for private participation in the power sector in Namibia. Subsequent to the enactment of the Electricity Act 2007, the Electricity Control Board (ECB) began the development of necessary information, requirements, and process for promoting independent power producers (IPPs). While the process of enactment of Electricity Act 2007 was underway in 2006, ECB approached and received assistance from the U.S. Trade and Development Agency to develop the necessary framework models and processes in preparation for initiating an IPP regime in the country. ECB selected CORE International through a competitive process to provide the necessary technical assistance (TA) and capacity building to ECB in key areas including market models, regulatory models, tariff development, power purchase agreement (PPA) development, and the development of various framework agreements typically required as part of an IPP project. Throughout the duration of the TA by CORE International, NamPower and ECB collaborated with each other. Also, NamPower managers participated in a number of work sessions and workshops facilitated by CORE International. NamPower also commented on the work conducted by CORE. A copy of the Final report was also provided to NamPower in addition to the ECB, the client.

Shortly after the completion of this TA by CORE, ECB approached the U.S. Trade and Development Agency (USTDA) for further technical assistance as ECB had already started receiving applications from various IPPs for licenses. Specifically, ECB requested USTDA to provide funding needed to continue the services of CORE International in the area of further refining the IPP application review process, evaluation of technical and financial documents submitted by the applicants, and related areas involved in a fair and transparent evaluation and licensing process. CORE International is currently providing this TA to ECB.

While the ECB, as the national electricity regulator has the responsibility and statutory authority to regulate the sector, NamPower, as the national utility has the responsibility to ensure that adequate amount of electricity is generated and transmitted to meet the electricity demand in the country. Both entities have an important role to play in the sector and the development of the IPP industry. Each has a separate role and each needs to ensure that all decisions are coordinated so that the development of the sector is in accordance with the Electricity Act 2007 and government policies.

In this regard, the need for the two entities to coordinate the IPP process is crucial as the IPP industry should get a single message and the process for IPPs including the roles of the regulator and the utility (the buyer) should be clear and transparent. World body of experience confirms that the IPP industry is fraught with various risks and often even good IPP project go by the way side if the prospective investors are given confusing or conflicting signals from the various energy sector entities in a country – the regulator, the government, and the national utility.

## 2. The ECB-NamPower IPP Working Group

Recognizing the need for a single policy, regulation, procedure, and process for the development of the IPP industry in Namibia, ECB and NamPower have established a joint ECB-NamPower IPP Working Group (The Working Group) with the responsibility to ensure that the parties coordinate all aspects related to the development of an IPP industry. These include the development of (i) a National Integrated Resource Plan (NIRP), (ii) the transmission grid code,

(iii) a single document that provides all key information to prospective IPPs, and (iv) a clear and transparent process for IPP application filing, application, and licensing. In addition, clear processes need to be developed for both solicited and unsolicited IPPs including the individual roles of ECB and NamPower.

The Working Group includes five members each from the ECB and NamPower. Additional experts from within the two organizations or outside sources may be brought into specific work sessions of the Working group. However, such individuals as may be consulted by the Working Group from time to time as the need arises will not be official members of the Working Group.

The Working Group will report all of its activities and submit all of its reports and documents to the CEOs of ECB and NamPower for approval and final decisions. Any disputes between the Working Group members from the ECB and NamPower will be reported to the CEOs of the two organizations for resolution.

### **3. Term of the Working Group and Reporting**

The Working Group has been established for a period of one year and its term may be renewed for another year by mutual agreement of the parties. A comprehensive report of the activities conducted by the Working Group will be submitted to the CEOs of ECB and NamPower every month for the first three months and every quarter thereafter. This formal reporting requirement will not preclude the submission of any intermediate reports to the two CEOs on key issues that the Working Group may feel need to be brought to the attention of the top management.

### **4. Terms of Reference**

The Terms of Reference for the Working Group include the following key areas:

- Development of an IPP License Application Information Document
- Development of a IPP Licensing Application Review and Decision Process
- Development of an NIRP
- Development of a Transmission Grid Code
- Development of a Position Paper on the Optimum Market Model in Namibia
- Development of a Position Paper on both the Solicited and Unsolicited IPP Project Proposals

The following is a description of specific activities and results to be achieved by the Working Group during its first year.

#### **4.1 Development of an IPP License Application Information Document**

ECB has developed and posted a considerable amount of information on the IPP license application process on its web site. With all of this information as a starting point, the Working Group will conduct a review and finalize the information including any revisions. Once finalized, this will become the final and single source of information for any prospective IPP applicants. The Information Document should include the following types of information:

- General Information on the Legal and Regulatory Setting – Electricity Act 2007, Administrative Regulations, etc.
- Format for an IPP Application
- All requirements and Documents to be Submitted by the IPP Applicant as Part of the Application – feasibility study, environmental assessment, project technical details such as the site, size, technology, and other technical parameters, financial analysis, financing plan, delivered price of electricity, power purchase agreement (PPA) with NamPower, and other relevant documents
- Method of Application Submission to ECB

- Process for Maintaining Confidentiality of Commercially Sensitive Information Submitted by the Applicants
- Any Other Information Deemed Appropriate by the Working Group

The Working Group may also consider that the information is posted on the NamPower web site as well. This will be the best way to give the message to the IPP industry that there is a single IPP policy and process in the country.

#### **4.2 Development of an IPP Licensing Application Review and Decision Process**

It is a common practice in most countries with an IPP regime to provide prospective IPP applicants detailed information on the process used by the regulatory authority for reviewing applications for IPP licenses. This makes the process transparent and avoids any confusion. It also deters speculators to put in frivolous applications for IPP projects that have not been sufficiently developed.

Accordingly, the Working Group will develop a detailed IPP license application review process that will include the following:

- Process for the Documentation and Recording of the Application
- Detailed Criteria for Application Review and the Review Procedure
- Process for Requesting Additional Information
- Process for Making and Notifying Decisions – application rejection, provisional license, conditional license, and full license
- Appeals Process and Steps

#### **4.3 Development of an NIRP**

Both the ECB and NamPower have done some planning work for the development of an NIRP. NIRP is commonly defined as the “national” plan for the energy sector in a country and goes beyond the development plans that electric utilities or other energy enterprises (oil companies, gas companies, etc.) routinely develop. Typically, the plans developed by electric utilities are termed – (i) Capacity Expansion Plan, (ii) Investment Plan, or (iii) System Plan. Therefore, the plan developed by NamPower should be termed differently in order to avoid confusion with the NIRP which is a national energy plan deriving its basis from the national energy policy. For example, an NIRP will address all forms of energy and provide a direction with respect to the development of the **overall** energy sector including renewable energy, rural electrification, etc. In contrast, the plan to be developed by NamPower will and should focus on what is in the best interest of NamPower as an electricity enterprise rather than the implementer of Namibia’s national energy policy, a role reserved on to the regulator, the ECB. While ECB should take the lead for the development of the NIRP, NamPower, as the only and the lead entity producing power, should be extensively involved in the development of the NIRP.

Accordingly, the Working Group will develop an agreement on precisely how ECB and NamPower will proceed forward and specifically the role to be played by each party in the development of the NIRP. Once, an agreement is reached on the process, the Working group will jointly develop a detailed outline of the NIRP and develop a plan for financing the cost of the development of the NIRP.

In addition, the Working Group will develop a schedule for the development, review, public comments, and submission of the final NIRP to the Ministry of Mines and Energy for promulgation.

#### **4.4 Development of a Transmission Grid Code**

ECB provided a copy of the draft Grid Code to NamPower for comments. NamPower has provided comments to the ECB. At this point, the Working Group needs to move forward with the finalization of the grid Code. ECB and NamPower may appoint a subgroup of experts from their respective organizations to finalize and submit the Grid Code to the Working Group for final review. ECB may also consider issuing the document for public comments prior to finalizing the Code. Once finalized, the Grid Code will be submitted by the Working Group to the CEOs of ECB and NamPower for a final decision.

This process needs to be completed as soon as possible.

#### **4.5 Development of a Position Paper on the Optimum Market Model in Namibia**

In a previous assignment for the ECB, CORE International completed a report on various framework models for the power sector in Namibia including recommendations for the implementation of a market model. NamPower has requested ECB that it be designated officially as a Single Buyer and that Namibia should adopt a Single Buyer Model. A decision with respect to the market model to be adopted in Namibia will be important for the prospective IPP community. Therefore, the Working Group should develop a position paper on the pro's and cons of officially adopting a Single Buyer Model with NamPower designated as the Single Buyer. This position paper should be submitted to the CEOs of the two organizations for further debate and based on the recommendations in the paper; ECB should make a final decision on promulgating a market model for Namibia.

#### **4.6 Development of a Position Paper on both the Solicited and Unsolicited IPP Project Proposals**

The development of the IPP industry in many countries utilizes both solicited and unsolicited applications for private power projects. In CORE's previous report it was recommended to ECB that large IPPs should be negotiated as unsolicited IPP proposals whereas smaller IPPs, such as wind power projects or other renewable energy projects, should be negotiated on the basis of solicited proposals. Typically, the NIRP provides a basis for the regulator to decide which projects will be negotiated as solicited or unsolicited proposals. The Working Group will develop a position paper on the model to be adopted for promoting the IPP industry in Namibia. ECB may wish to adopt a model to negotiate only solicited proposals until after a NIRP has been developed and issued. After the issuance of the NIRP it would be more appropriate for the ECB to proceed on a parallel track for both solicited and unsolicited IPP projects.

The Working Group will develop a position paper on this subject and make a specific recommendation for adopting a process for receiving and reviewing IPP proposals. NamPower has requested ECB that renewable energy projects should be kept aside for a while until after specific government policies are developed on the future of renewable energy in Namibia. The Working Group will include specific recommendations on the deployment of renewable energy IPP Projects and include these recommendations in the position paper. The position paper will be submitted to the CEOs of ECB and NamPower for final discussion and decision.

The activities to be conducted by the Working Group will require external expert services. In the areas of the IPP process development, ECB has engaged CORE International to provide services for the development of draft documents and advise ECB on streamlining the IPP application review process. CORE will provide this support to the Working Group. In the other areas of the terms of reference, the Working Group will identify specific outside expert needs and propose to the CEO of the two organizations a request for specific services to be funded in order to facilitate the activities of the Working Group.