



GUIDELINES FOR THE REVIEW OF POWER PURCHASE AGREEMENTS (PPAs)

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1. BACKGROUND

The Botswana Energy Regulatory Authority (BERA) is a statutory body established under Section 3 of the Botswana Energy Regulation Authority Act, 2016 (and as amended in 2020).

The mandate of BERA is to regulate the energy sector in Botswana in accordance with provisions of the BERA Act, 2016. The specific functions of the BERA as provided in the Act are:

- (a) ensuring sustainable and secure supplies in the regulated sector;
- (b) setting and maintaining service standards;
- (c) ensuring that tariffs in the regulated sector are fixed on the basis of a tariff methodology that has been set up in a transparent manner taking into account Government policy on cross subsidies between classes of consumers;
- (d) ensuring that interests between consumer, customer and licensee are adequately balanced;
- (e) protecting and preserving the environment; and
- (f) ensuring that the regulation of the energy sector is done in accordance with the best international regulatory practice.

BERA is mandated to review and grant regulatory consent to utilities to enter into Power Purchase Agreements (PPAs) pertaining to the regulated sector in accordance with sections 5, section 6 (2), section 9 (2) and section 33 of the BERA Act.

The purpose of these guidelines is to ensure that the review of PPAs submitted to BERA is standardized and done objectively, transparently to ensure technical, financial and economic viability of the Electricity Supply Industry (ESI) in Botswana. These guidelines shall apply to all PPAs between the electricity generation/transmission/distribution/retail companies (seller) and the off-taker (buyer) as well as on wheeling transactions.

2. OBJECTIVE OF THE REGULATORY REVIEW

The overall objective of conducting a regulatory review of the PPAs is to ensure that the terms of the PPAs comply with the legal requirements and the governing laws in the energy sector, and further ensure that the agreements are fair and balanced to the contracting parties. Furthermore, the regulatory review will assist in ensuring that the PPAs are non-discriminatory, prudent and that both parties will execute and abide by their terms while ensuring the technical, financial and economic viability of the development of the ESI in Botswana.

3. PPA PRINCIPLES

Following the electricity market restructuring through the Electricity Supply Act (Cap 73:01) the Botswana Electricity Supply Industry is expected to attract new players to come into the market mainly in the power generation segment. Independent Power Producers (IPPs) are expected to become an important part of the generation mix in Botswana. These IPPs will have to enter into Power Purchase Agreements with the Single Buyer (SB) Licensee, which is the Botswana Power Corporation (BPC), which will be reviewed and approved by the Authority.

In reviewing the PPAs, BERA shall be guided by the following principles:

- a) Cost reflectivity;
- b) Promotion of the security of the electricity supply;
- c) Conformity to technical requirements of the ESI and the Grid Code;
- d) Ensuring that local demand of electricity is met or satisfied before electricity is exported;
- e) Compliance and Consistency with the Electricity Supply Act, the Botswana Power Corporation Act, and where applicable the Mines and Minerals Act or any other relevant laws governing the Energy Sector;
- f) Consistency with aspirations of the National Energy Policy;
- g) Ensuring the technical, economic and financial viability of projects in the energy sector as a whole;
- h) Reflect the International best practice on structuring of PPAs; and
- i) BERA shall therefore adopt the *ex-ante* review of PPAs with the view of minimizing the level of regulatory intervention during the term of the PPA.

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4. TARIFF REVIEW BASIS

The tariff is one of the most important aspects of any PPA. The tariff must be understood as the actual price that the off taker pays to the power seller for the energy supplied. The tariff is also understood to include the broader set of terms that surrounds the price like amount of money payable by the off taker to the seller each month.

The tariff must be cost-reflective or must allow investors an acceptable, regulated rate of return. The escalation of the tariff must be stated as this will ensure the predictability of the tariff over the term of the PPA. Escalation or indexation of tariffs should be stated in terms of:

- a) period
- b) escalation factor
- c) reference or source for escalation factors

The base case financial model is to be annexed to the PPA. Detailed models should be provided for analysis of tariffs and the assumptions included like engineering, procurement and construction (EPC) costs, site acquisition and any associated lease costs thereof, rate of return, inflation, indexation rates, including a levelized cost of electricity tariff.

The PPA should state the cost structure of the tariff – either capacity, energy or both, and the method of calculation applicable. Cost pass through components of the tariff, if any, should also be specified.

5. OTHER FINANCIAL CONSIDERATIONS

- a) Project Structure:
 - a. Public Private Partnership (PPP);
 - b. Government Sponsored; and
 - c. Private Sponsored.
- b) Project financing details that will be available for the project construction and start up:
 - a. Total project cost;
 - b. Breakdown or composition of financing;
 - c. Sources of financing; and
 - d. Timing of financing.
- c) Financial and project models – detailed models should be provided for financial and economic analysis of the project.

- d) The financial analysis will focus on:
1. Amount of electricity – the amount of electricity to be sold or purchased should be stated in MWh or kWh depending on the size;
 2. Charges – charges should be stated as either capacity or energy charge and or any other charge agreed and the method of calculation used;
 3. Tariffs and assumptions included like rate of return, inflation, indexation rates;
 4. Project Net Present Value (NPV), Internal Rate of Return, Average Debt Service Coverage Ratio (ADSCR), Loan Life Coverage Ratio (LLCR), etc;
 5. Project cost vs Technology – Consideration of selecting an optimal technology. Consideration of purchasing the technology at a lower cost, optimal plant configuration. Consideration of tariff if the plant is a base load or peaking plant;
 6. Evaluation of the applicant's financial capacity based on past records;
- e) Cost reflectivity – the average tariff in the agreement should be cost reflective. Comparison should be made to the tariff in the pricing model for the years under review;
- f) Creditworthiness of the parties: Both seller and off-taker face risks associated with the creditworthiness of the other party. For the off-taker, the ability of the seller to pay any damages for delays to the construction or performance guarantees are paramount. As IPPs are in most cases special purpose vehicles with no assets other than the project assets, off-takers may seek ways in which to enhance the credit of the IPP such as guaranties, letters of credit, etc. The seller on the other hand may be concerned about the off-taker's ability to pay for the electricity supplied, and may in turn require letters of credit or other guarantees to assure payment for the electricity produced. Where government support or government guarantees are required and agreed upon, the support should be clearly specified and mechanisms should be put in place through which the government support will be accessed. Support will usually be granted through a government support agreement.
- g) Environmental credits: The PPA should specify how environmental credits obtained by the project, if any, would be shared by or allocated between the parties.
- h) Payment terms and period: The terms of payment, usually 30 days after the invoice date, should be specified. The method of payment should be stated and if it is by bank transfer, account details should be provided. Payment provisions may include instructions to pay into an escrow account to provide for payments under the finance structure of the project.

- i) Disputed invoices: The PPA should state how invoice disputes should be settled. The amount which is not in dispute should be settled within the stipulated period. After the disputed amount is clarified or agreed, a debit note or credit note should be issued.
- j) Currency: The currency in which payments must be paid must be specified.
- k) Taxation: The PPA must specify the responsibilities of the parties with regard to taxes.
- l) Review of charges: Usually the PPA tariff is fixed for the duration of the PPA as this is the basis upon which the project is financed. If the tariff is to be reviewed, the review period and the method by which the tariff will be reviewed should be agreed. Review grounds should be limited to ensure that the profit margins or returns on investment remains at the levels agreed to in base case financial model.
- m) The PPA must have clauses that will facilitate the financing of the plant, referring to the rights of lenders under direct agreements. Project lenders are potential owners of the plant, contingent on an uncured default by the Seller under its loan agreement with them. The PPA in this regard is a key component of the project. Contracting parties may therefore make a provision to ensure that the lenders have step-in rights in such instances to take over the project assets including the PPA. While the PPA may have text addressing this issue, it might not be adequate from a lender's perspective in that it does not provide the direct contractual connection with the off-taker ("privity of contract"). In such a case a separate document often referred to as a "lender consent agreement" may be required.
- n) The PPA must include any other information that may affect proposed tariffs.

6. LEGAL PROVISIONS

Although a PPA is a single document, the purely "legal" provisions should be separated from the provisions relating to commercial and technical aspects for the PPA in order to assist the different departments in the regulator to consider the necessary aspects when faced with the approval or oversight of a PPA.

The following are the key legal provisions:

- a) Contracting parties: Names and addresses of contracting parties. The contracting parties should be legal entities under the laws of origin.
- b) Interpretation and definitions: Definitions and interpretation of certain words and phrases form part of the PPA.
- c) Representations and Warranties by the parties regarding authority to enter into the PPA and related matters.
- d) Licensing: The contracting parties must have the necessary licenses. The IPP must have a generation, transmission, distribution or any applicable licence, or significant infrastructure permission from BERA. Other consents and permissions such as investment endorsements and environmental clearances may also be required. A licence can also be provisional according to the laws of the particular jurisdiction.

- e) Effective date of the PPA: The effectiveness of the agreement must be specified. Some PPAs become effective upon signature, while others postpone the operational effectiveness until certain conditions precedent have been met. For example, the PPA may provide a date by which the necessary approvals, regulatory oversight over the PPA, licenses and reaching financial close must be reached, failing which the PPA will terminate without consequences to the parties.
- f) Term of PPA: The duration of the PPA must be stated in the agreement. PPA periods in the region range from 20 – 25 years, depending on the financing structure of the PPA. Provision should be made for the extension of the period due to for example force majeure.
- g) Renewal: The agreement should state whether the PPA term could be renewed and the basis on which the PPA will be renewed, if any.
- h) Net export energy: The amount of electricity (net energy) to be sold should be stated. The PPA may, especially in the case of Renewable Energy Power Purchase Agreements state the annual maximum amount of net energy, in which case the off-taker may be entitled to pay a lower per unit sale price for power generated in excess of the ceiling. A more extreme variation of this provision would have the PPA placing no obligation on the off-taker to purchase any surplus power.
- i) Off-taker: The PPA should specify whether the power or energy may only be sold to the off-taker, or to other parties as well.
- j) Delays: The PPA must provide for delay liquidated damages (where applicable) in case of delays to the commercial operation date
- k) Events of default: the contract must contain provisions to deal with events of default, the curing of defaults, remedy of the default, damages and termination of the PPA for a default that cannot be cured. Such damages are often capped. The PPA should state how changes in law resulting in a change in cost would affect the PPA, and how the tariffs would be adjusted should such a change in cost occur. Some PPAs restrict such changes in law to changes that are discriminatory against the power project in law. Some PPAs also impose a threshold based on the total impact of the proposed changes over the lifetime of the project, or the impact on the project internal rate of return as the benchmark before a change in law would be approved. The PPA should specify the mechanism by which the tariff should be adjusted. Any tariff adjustments should be subject to prior regulatory approval.
- l) Liability and Indemnity: There has to be a clause prescribing parties' liabilities and the cap thereof and indemnity of parties and employees as the case may be.
- m) Dispute Resolution: Subject to national law and the mandate of the regulator to arbitrate disputes, the parties should endeavour to resolve disputes amicably and through negotiation and if it fails they should engage an arbitrator mutually agreed upon by the parties or, failing the agreement, to be appointed in accordance with applicable arbitral rules¹. The seat of arbitration and the means of enforcement of

¹ Common applicable arbitral rules are those of the United Nations Commission on International Trade Law (UNCITRAL), the Arbitration Foundation of Southern Africa (AFSA), the International Chamber of Commerce (ICC), the International Centre for Settlement of Investment Disputes (ICSID) and the London Court of International Arbitration (LCIA)

arbitral awards should be specified. Member states may be signatories to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of 1958 which will provide added comfort to the investors.

- n) Force majeure clauses: The PPA must have clauses dealing with force majeure events, the consequences thereof and the responsibilities of the parties during a force majeure event. Provision should be made for the possible termination of the PPA due to a prolonged force majeure event and the financial obligations of the parties in such a case.
- o) Termination provisions: The grounds for termination should be clearly stated and should not disadvantage any of the contracting parties. Provision should be made for termination as a result of Buyer Default or Seller Default, and the consequences of termination, including Termination Amounts and damages payable. The PPA should also regulate what would happen with the plant in case of termination of a Buyer Default or a Seller Default or a prolonged force majeure event. The termination provisions are usually subject to the provisions of the Direct Agreement with the lenders.
- p) Transitional provisions at the termination of the PPA: The PPA should specify what would happen at the termination of the PPA. The plant life may differ from the duration of the PPA. In that case, provision should be made for either extension of the PPA with the original off-taker at a renegotiation tariff, or a new PPA with a different off-taker, in which case transmission connection and wheeling arrangements should be put in place. The generation licence should be amended to reflect the new arrangements. The PPA should also indicate the transfer of ownership of the plant assets, if any, and the responsibility of decommissioning of the plant at the termination of the PPA.
- q) Transfer of ownership and control and obligations pursuant to such transfer: Some PPAs restrict transfer of the stake of the majority or controlling shareholder for a number of years to ensure that the parties on whose reputation the project is staked remain in the project.
- r) Insurance provisions: Required insurances should be stated and proof of continued insurance during the lifetime of the project should be provided. Insurance could include general liability insurance, asset insurance, third party liability insurance, political risk insurance, and business interruption insurance.
- s) Usual boilerplate provisions on severability of clauses, non-waiver, confidentiality, amendment of the agreement, etc. The PPA must allow for the assignment of the rights of the IPP to the lenders under the direct agreement.
- t) The agreement must state the applicable law.
- u) Communication and Notification Protocol: The PPA must contain provisions on the means and standards of communication between the IPP and the off-taker, and the timeframes for notification. For example, the PPA must allow for the recording of communications with the systems operator, and the procedures in respect of notification of force majeure events must be set out.
- v) Signing: Provision for signing should be made at the end of the agreement for the parties to sign after reaching closure.

7. TECHNICAL CLAUSES

The following technical issues must be addressed in the PPA:

- a) The PPA must contain project details – size, location, primary energy source, key project characteristics.
- b) Plant configuration: Is the plant a base load or peaking plant? The type of energy should be indicated as firm or non-firm energy.
- c) Plant capacity: Nameplate or installed capacity and net export energy and rated capacity should be defined (where applicable). Capacity factors should be stated.
- d) Project timelines should be specified in a project implementation schedule indicating target connection and target commercial operation dates, including other milestone dates.
- e) Technology proposed: Technology should be internationally acceptable, tried and tested, and the use of new units should be specified where applicable. Proposed technology should not be obsolete or used, unless specifically allowed by the contracting party.
- f) The proposed technology must be procured in line with approved policies for the introduction of new technologies in the time frame provided in those policies.
- g) The point of delivery and the point of supply must be specified. The point of delivery is the point where electricity is deemed to be delivered to the off-taker and risk of loss passes to the off-taker.
- h) Testing and commissioning: plant testing, commissioning and acceptance tests need to be specified.
- i) Commissioning: The PPA should specify the technical commissioning and acceptance processes that will lead to commercial operations date being reached and provide the commercial arrangements regarding commissioning energy.
- j) Provision should be made for auxiliary energy to be supplied to the plant by the grid if required.
- k) Adherence to Grid Code: Configuration of the project should be compliant with the applicable grid code
- l) Technical specifications: the plant (and grid connection) must meet the technical specifications required by the off-taker or the utility, as the case may be.
- m) Transmission connection arrangements: These include payment of the costs of connection to the grid, and costs of additional transmission upgrades, reconfigurations etc if required as a result of connection by the new plant to the grid, should be dealt with in the PPA or in a separate connection agreement.
- n) Provision should be made for scheduled and unscheduled plant and transmission outages.
- o) Curtailment: The PPA must also specify the commercial arrangements where the plant is available, but the off-taker is not able to take the power produced or the grid is constrained. Deemed energy payments may be required under such circumstances, the payment of which would be subject to agreed transmission availability thresholds. The agreement must also specify whether such thresholds

are inclusive of curtailment as a result of emergencies or force majeure events on the transmission system. In the case for Renewable Energy PPA's, where a party is liable to pay for available capacity that was not actually delivered, the PPA will make provision to calculate available capacity and/or electrical power output based on the renewable energy source data available during the curtailment period and the power curve data for the renewable energy facilities. Under this arrangement, the off-taker is often required to construct and maintain adequate meteorological station(s) capable of measuring and recording representative renewable energy source data 24 hours a day, and this data can be used to calculate payment owed for the curtailed energy.

- p) Metering and billing should conform to the applicable standards. The PPA must state clearly which of the contracting parties shall own, install, operate and maintain all electric metering and telemetry equipment associated with the Project. If the meter is not at the point of delivery, appropriate provision should be made in line with best practice for loss compensation metering to account for any transmission and/or transformer losses. Provision should also be made for either party that it may from time-to-time request for a retest of the metering equipment at its own cost, if it reasonably believes that the meters are not accurate within established tolerance limits.
- q) Where an approved Environmental Impact Assessment (EIA) authorisation is required as a condition precedent to the PPA, such should be submitted. The EIA authorisation submission should also include the aspect of plant decommissioning.
- r) Technical description of the project and drawings should be provided.
- s) Availability and availability declarations should be specified. With intermittent renewable energy (RE) plants the declarations are indicative only.
- t) Dispatch provisions should be specified. Usually with intermittent resources the plant is dispatched when the resource is available.
- u) Plant Maintenance and Operations responsibilities of the parties should be specified.
- v) In the case of an IPP licensed to export power, then a Grid Use Of System (GUOS) agreement should be provided and recognised.

APPROVED BY THE BOARD OF BERA AT ITS MEETING OF THE 09th DAY OF JULY 2021.



GEOFFREY S. SEREBOLO
CHAIRPERSON