APPLICATION FOR AN ELECTRICITY TRANSMISSION LICENCE

Form EL 2

Please send the completed form to

ZIMBABWE ENERGY REGULATORY AUTHORITY
14th Floor Century Towers
45 Samora Machel Avenue
P.O Box CY308 Causeway
Harare

Tel: +263-4-780010, 253461
Fax: 263-4-250696
E-Mail: admin@zera.co.zw
Website: www.zera.co.zw

Application must be submitted in triplicate plus 1CD/r soft copy and application must be accompanied by an application fee of RTGS$20 000.00 plus 15% VAT

Tick the appropriate box below

NEW LICENCE APPLICATION		FIRST DEEMED LICENCE APPLICATION		RENEWAL OF LICENCE APPLICATION BY LICENCEE/ DEEMED LICENCEE	

N.B. An applicant applying for the renewal of its licence is required only to record in this application any significant changes of particulars recorded in its original or preceding applications.

APPLICATION FORM FOR THE ISSUE OF A TRANSMISSION LICENCE BY THE ZIMBABWE ELECTRICITY REGULATORY AUTHORITY (ZERA) IN TERMS OF THE ELECTRICITY ACT (CHAPTER 13:19 OF 2002)

Introduction

This document is intended to provide guidance to persons wishing to apply to the Zimbabwe Electricity Regulatory Authority (ZERA) for a transmission licence in terms of the Electricity Act (Chapter13:19) number 4 of 2002 for the provision of electricity services.

Section 40 (1) of the Act requires that no person shall in Zimbabwe operate an electricity undertaking that generates, transmits, distributes or supplies electricity without an appropriate licence issued under the Act.

The Transmission licence shall authorize the licencee to do any one or more of the following as may be specified in the licence:

- to carry on grid construction, operation, and maintenance of transmission facilities within Zimbabwe,
- to carry on the operation of an electric power system including, but not limited to, the following:
  - i. generation scheduling, commitment and dispatch,
  - ii. transmission scheduling and generation outage co-ordination, iii. transmission congestion management,
  - iv. power pooling
  - v. international transmission co-ordination,
  - vi. procurement and scheduling of ancillary services and system planning for long term transmission capacity,
  - vii. such other activities as may be required for the reliable and efficient operation of an electric power system.

Applicants are reminded that it is an offense under the Act (Section 60) to make any statement which he knows is false or does not have reasonable grounds to believe to be true before the Authority. Provision of false, misleading or incomplete information would go directly to the question of the suitability of an applicant to hold a licence.

Basis of the form

The application form is issued in terms of section 46 of the Act that requires that an application for a licence shall be made to the Authority in the form and manner prescribed.

Use of the form

Applicants should provide the requested information in the spaces provided and where necessary provide further information. The form can be filled electronically.

Prior reading

It is advised that applicants familiarize themselves with the provisions of the ACT and the Zimbabwe Grid Code before filling in the form.

LICENCE APPLICATION FORM

1. Identity of the applicant

Name of applicant	
Legal form of applicant	
Physical address	
Postal address	
Telephone number	
Fax number	
Contact person	
Contact person s e-mail address	
Contact person s phone number	

Attach where applicable –company registration details, memorandum of association, lease agreements.

2. Is the required service a transmission service or sub-transmission service

Transmission ☐ Sub-transmission ☐

3. State operational voltage (state the operational voltage to be used by applicant)

Transmission Voltage required	Tick the appropriate voltage level
420 kV (maximum)	
330 kV	
220 kV	
110 kV	
Sub-transmission Voltage required	
132 kV	
88 kV	
66 kV	

4. Line length

Transmission Voltage required	Indicate Length of network in km

420 kV (maximum)	
330 kV	
220 kV	
110 kV	
Sub-transmission Voltage required	
132 kV	
88 kV	
66 kV	

(Please attach a map and single line diagram showing the existing lines)

5. Existing transformer capacity for the transmission and sub transmission transformers and loading information (please provide information on the existing transformer ratings by voltage levels and their recorded peak loads)

Substation	Installed transformer capacity by voltage level (MVA)	Peak load (MVA)	Transformer continuous reserves (MVA)	Transformer momentary reserves (MVA)

6. Existing transmission lines constraints and investment required in the next five years (state the proposed investments on the transmission and sub transmission lines indicating the constraints to be addressed, level of investments and financing mechanisms.

Line by Voltage level	Length of line in km	Constraint(s) to be addressed	Investment required $	Years project is to be	Financing mechanism

7. Existing substations constraints and investment required in the next five years (state the proposed investments on the transmission and sub transmission substations indicating the constraints to be addressed, level of investments and financing mechanisms.

Substation	Constraint(s) to be addressed	Investment required $	Years project is to be	Financing mechanism

8. Transmission and sub-transmission line expansion plans (state you transmission and sub-transmission plans stating the purpose of expansion, the length of the proposed line, investment required and funding mechanism)

Line by voltage level	Length of line in km	Purpose of line	Investment required $	Years project is to be	Financing mechanism

9. Existing substations constraints and investment required in the next five years (state the proposed investments on the transmission and sub

transmission substations indicating the constraints to be addressed, level of investments and financing mechanisms.

Substation	Constraint(s) to be addressed	Investment required $	Years project is to be	Financing mechanism

10. Other investments to improve the safe and efficient operations of the transmission network

11.

Project	Constraint(s) to be addressed	Investment required $	Years project is to be	Financing mechanism

12. Energy and peak demand projections (Provide for system peak and demand forecasts for the next twenty years summarizing assumptions made in deriving the projections

13. Existing internal generation capacity (provide the internal energy and capacity secured through power purchase agreements with local plants)

14. Availability of imports (provide information on secured imports and required imports for the next five years to meet the projected demand)

15. Energy and capacity to be met by demand side management and embedded generators

16. Provide for criteria you plan to use for guarantying security of supplies

17. Provide information on your capacity and energy balance for the next five years assuming your stated planning criteria

18. For new players only (Availability of connection agreement with main transmission company)

Yes ☐ No ☐

19. For new players only (Has grid impact studies been carried out?)

Load Flow Analysis:	Yes	No ☐
Fault Analysis	Yes	No ☐
Stability Analysis	Yes	No ☐
Environmental Impact Assessment	Yes	No ☐
Financial Analysis	Yes ☐	No ☐
Economic Analysis	Yes	No ☐

(Please attach reports of the studies and all the assumptions made)

20. For new players only (Availability of space for the accommodation of protection, communication and network control equipment)

Yes ☐ No ☐

21. For new players only (Availability of circuit breaker capable of interrupting the maximum short circuit at the point of connection to the main transmission system)

Yes ☐ No ☐

22. For new players only (Provision of isolators to adequately isolate the circuit breaker for maintenance purposes at the local point)

Yes ☐ No ☐

23. For new players only (Connection of applicant s′ hi-voltage side transformer and provision of neutral to the ground (State whether Wye, with the neutral available for connection to ground))

Yes ☐ No ☐

24. For new players only (Under frequency relays for load shedding (state the manner in which Demand, subject to Automatic Load Shedding, will be split into discrete MW blocks to be actuated by Under frequency Relays).

25. For new players only (Tripping facility reliability levels - overall dependability (99%))

Yes ☐ No ☐

26. State the envisaged maximum and minimum voltages in normal and emergency conditions

	Normal Conditions		**Emergency Conditions**	
Nominal Voltage (kV)	**Maximum (KV)**	**Minimum (KV)**	**Maximum (KV)**	**Minimum (KV)**
400				
330				
220				
132				
110				
88				
66				

27. State your line loading limits that shall not be exceeded in steady state operation of the transmission and sub-transmission systems for different maximum conductor temperatures and line designs.

28. State your reserve requirements for the transmission and sub-transmission systems for single outage condition as follows:

- Transmission and sub-transmission substation

- Transmission and sub-transmission lines

29. State the minimum way leaves for your proposed transmission system (normal, at road crossing and rail crossing)

30. State the minimum line clearances for your proposed transmission system by voltage level

31. State the fault clearance times you envisage to comply by different voltage levels

32. Provide the minimum protections schemes you plan to implement for: (i) Generators
(ii) Transmission lines
(iii) Sub-transmission lines
(iv) Distribution lines
(v) Transformer protection
(vi) Substation bus bars
(vii) Tele-protection requirements
(viii) Over voltage protection
(ix) Protection of compensation equipment
(x) Under frequency loading schemes
(xi) Fire protections
(xii) Earthing requirements

33. <u>Operations information</u>

a. Provide power purchase supply agreements with generation plants b. Provide power supply agreements with distributors
c. Provide pricing arrangements with generators
d. Provide pricing arrangements with distributors
e. Provide your safety manuals and templates and/or other documentation to address employee and public safety issues
f. Provide your customer service charter
g. Provide a maintenance schedule transformers and switchgear for the purpose of inspections and compliance monitoring
h. Provide documentation regarding your test procedures for maintenance (the information provided should include issues to be tested and compliance standards
i. Provide information on envisaged:

- provision, and maintenance of metering equipment
- modalities for collection of metering data

- accuracy of all equipment used in the process of electricity metering
- testing procedures to be adhered to
- storage for metering data
- competencies and standards of performance and
- metering demarcations with generators and distributors

j. Provide documentation regarding your guidelines for:

- Power Systems Protection and Control
- Transformer Protection Planned Maintenance Procedure and Instructions
- Feeder Protection Planned Maintenance and Instructions
- Transformer Protection Authoritying Procedure and Instructions
- Feeder Protection Authoritying Procedure and Instructions
- Generator Protection Planned Maintenance Procedure and Instructions
- Generator Protection Authoritying Procedure and Instructions
- Parameter Guidelines for Protection Tests

k. Provide your operational performance for the last twelve months as follows:

- Energy from local generation by plant
- Imports by source
- Energy purchased from IPPs and embedded generators by source
- Inadvertent energy
- Exports
- Energy load shed
- Capacity arising from demand side management
- Power wheeled
- Energy at Bulk Supply Point
- Energy Sold to ZEDC System
- maximum demand System load
- failure
- Transmission and sub-transmission losses (separate) System
- minutes
- Transmission system minutes
- Number of supply interruptions
- Average duration of interruptions (minutes)
- Number of frequency excursions outside statutory limits
- Number of voltage excursions outside statutory limits

- % of transmission line faults resulting in supply interruptions
- % of sub-transmission faults resulting in supply interruptions
- % of transmission/sub-transmission transformer resulting in supply interruption
- Number of supply interruption by cause (human error, lightening, bush fires, other)
- % of transmission/sub-transmission substation operated at full capacity
- % of lines operated at thermal rating
- Average defects duration
- Planned maintenance done (%)
- Number of supply interruption due to protection malfunction
- Availability of protection system (%) Number of
- power control system failures Power system
- communication availability (%) Sales
- Revenue/Employee
- Gwh/employee
- Number of non-fatal accidents
- Number of fatal accidents
- Number of environmental complaints
- Number of customer complaints
- Average processing time for application
- Average time for system studies
- Average Connection time after system studies and payment of Connection Fees
- Number of customers awaiting connection due to transmission and sub transmission constraints
- Average waiting time by customers awaiting connection due to ZETDC constraints
- Average time for responding to written correspondence by customers
- Average transformer life
- Average line life

34. Technical capabilities

Applicants must show that they have the technical capacity (skills) to comply with the conditions of the licence they are applying for and any associated codes and guidelines as published at the time. Applicant should also demonstrate the technical resources required are there.

In order to demonstrate technical capacity to the Authority, applicants should provide among others –

(i) details of their experience in and knowledge of the electricity industry
(ii) summary of the skills and experience of the senior managers and key technical and non technical personnel and their relevance to meeting the requirements of the licence. Technical expertise in complaints handling, monitoring and testing services, operations and maintenance of systems to be demonstrated.
(iii) If applicant is to rely on another entity to provide skills a summary of the relationship between the entity and the applicant including formal agreements to provide services, duration of agreement and a summary of evidence that the contracted entity has the necessary skills, experience and technical capacity has to be provided together with the application. Applicant has to attach relevant contracts and other documents as proof.

35. Financial projections and security

The applicant is required to submit (where possible):

(i) Audited financial statements for the previous three years
(ii) Budgeted financial statements for the next three years showing total revenues (per project) to be earned, costs to be incurred and sales based on realistic and clearly defined assumptions
(iii) Estimates of net annual cash flows for the following 3 years
(iv) Current profit and loss statements, balance sheets and any other information and any other information that can demonstrate an acceptable credit rating.
(v) Declaration from the Chief Executive Officer stating that the officer is not aware of any factor that would affect the applicant s ability to securely finance the activities to be performed under the proposed licence
(vi) A written declaration from an independent auditor or financial advisor stating that
    a. the applicant has not been deregistered, wound or dissolved, is not under external administration
    b. that they are not aware of any factor that would affect the applicant s ability to securely finance the activities to be performed under the licence
    c. that the applicant s current financial commitments are appropriate to the applicant's size and reserves
(vii) A comprehensive business plan including strategic direction, objectives, opportunities in the market, forecast results, impact of differing assumptions or scenarios on the applicant s financial position.
(viii) Long – and /or short-term credit rating from a reputable organization

36. Equity structure of the applicant

If the company is a wholly owned subsidiary of another company or one of a group of related companies provide :

a. details of the ownership structure of the group, including proportions of equity held
b. details of the contractual arrangements that define relationships within the group – shared resources, guarantees, revenue flows, obligations
c. consolidated audited financial statements for the group

Summary information about the parent company and the ownership structure of the related companies should be provided. Any breach of statutory or legal obligation of any of the directors, principal owners and principal officers should be made known to the Authority.

In the table below show shareholding of the company:

Name of shareholder	% shares held	Full address of shareholder
1.		
2		
3.		

37. Previous applications

Provide:

(i) Details of any offences or successful prosecutions in Zimbabwe
(ii) Details of any licence currently held by the applicant or company related to the applicant in Zimbabwe
(iii) Revocations/suspensions of previous licences
(iv) Details of any previous unsuccessful utility licence applications by applicant or company related to applicant including reasons for refusal

38. Human Resources

Provide the following information.

Number of managerial employees	
Number of non-managerial employees	
Number of technical employees	
Number of non-technical employees	
Total	

Attach the following:

- Organizational chart showing the key positions, the status of the positions in terms of manning levels and key functions of each position Training policy and program,
- relevant industry policies

39. Names and addresses of key personnel of the applicant

Applicant needs to reveal in the application the names of the key personnel who make important decisions in the organization. Such people include Chief Executive officer, directors, company secretary

Name of person	
Position held	
Physical Address	
Telephone	

Name of person	
Position held	
Physical Address	
Telephone	

Additional information

It is very important for the applicant to provide as much information as possible. The applicant can therefore provide further information if they feel that such information will help in the consideration of the application by the Zimbabwe Energy Regulatory Authority (ZERA). The applicant should also demonstrate that their operations are in compliance with other laws of the land such as investment regulations, environmental laws and other relevant statutes.

Declaration

We, and
declare that we have personally reviewed the above statements and that they
are true and correct and complete in all material aspects. We further declare that the information was prepared and compiled under our supervision and control and that we are authorized by the applicant to submit this application on its behalf. We declare that we have a positive duty to ascertain the accuracy and completeness of this information. If issued with the licence we will abide by all provisions of the Electricity Act and all statutory regulations, codes and standards that will be from time to time issued by the Authority.

Dated this day of 200 at

Signature : Title

: Signature :

Title :

Company stamp :