NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

APPLICATION FOR A LICENCE TO GENERATE ELECTRICITY IN TERMS OF SECTION 11 OF THE ELECTRICITY REGULATION ACT, NO 4 OF 2006

Please return completed form to:

HOD: Licensing and Compliance: Electricity
National Energy Regulator of South Africa
Kulawula House, 526 Vermeulen Street
Arcadia
Pretoria
Gauteng

P.O. Box 40343
Arcadia
0007

Tel (012) 401 - 4600

Fax (012) 401 - 4700

SECTION A PARTICULARS OF APPLICANT

A1 Full name of applicant
Eskom Holdings Limited

A2 Address of applicant, or in the case of a body corporate, the registered head office

Megawatt Park
Maxwell Drive
Sunninghill
Johannesburg
2196

A3 Telephone number of applicant
(011) 800 8111

A4 Fax number of applicant
(011)800 3442

A5 Contact person of applicant

Name **Lynette Vajeth**

Telephone No **(011) 800 3441**

Fax No. **(011) 800 3442**

A6 Legal form of applicant
Company

Note to Section A

State whether the applicant is a local government body, a juristic person established in terms of an act of parliament, a department of state, a company or other legal body. If the applicant is a local government body, attach a copy of the proclamation establishing such body. Where the applicant is a company, the full names of the current directors and the companies registered number are required.

Company Directors:

MV Moosa	**(Chairman)**
PJ Maroga*	**(Chief Executive)**
M Bello	**(Nigerian)**
LCZ Cele	
Dr BM Count	**(British)**
LG Josefsson	**(Swedish)**
WE Lucas-Bull	
PM Makwana	
E Marshall	
JRD Modise	
V Mohanlal Rowjee	
AJ Morgan	
SA Mpambani	
U Nene	
B Nqwababa*	

Company Secretary:
M Adam

***Executive Director**

Registration Number: 2002/015527/06

SECTION B COMMENCEMENT DATE OF LICENCE

B1 Desired date from which the licence (if granted) is to take effect
November 2009. It is planned that the first tranche of units will be commercially available in March 2010 and this will allow for 4 month period during which to do tests.

Please Note.

If the applicant intends operating more than one generating station under the proposed licence, please repeat Section C through J of this form separately for each generating station. Please ensure that the actual or proposed location of each generating station is adequately described.

SECTION C PARTICULARS OF GENERATING STATION

(To be provided for each generating station separately)

C1 Name of generating station
Project WEF 1 – 100MW West Coast Wind Facility
(Note: This is a working name and a final name will be chosen at a later date)

C2 Location of generating station
Western Cape on the West coast close to the town of Koekenaap (Vredendal area)

C3 Address of generating station
The specific address still requires finalisation as the required land for the proposed site is still under negotiation

Please forward all communication to:
c/o Project Manager – 100MW West Coast Wind Facility (Project WEF 1)
Eskom Holdings Limited
P O Box 1091
Johannesburg
2000

C4 Contact person at generating station

Name	**c/o Morore Mashao**
Telephone Number	**+27 11 800 3822**
Fax Number	**+27 11 800 5498**

C5 Type of generating station (thermal, nuclear, hydro, pumped storage, gas turbine, diesel generator or other)
Wind

C6 Date on which the generating station was commissioned for an existing station or the expected commercial operation date for a proposed station.
It is planned that the first tranche of units will be commercially available in March 2010 with that all the units will be commercially available by May 2010.

C7 The installed capacity of each unit within the generating station
Project WEF 1 will consist of 50 units with an installed capacity of 2MW per unit.

C8 Maximum generating capacity (MW) expected to be available from the generating station and energy to be produced (MWh) over the next / first 5 years of operation. These estimates should be based on modelling of how the power station will fit into the demand profile of its customers, taking into account the least cost energy purchase consideration and demand management options of customers.

Year	Max MW Installed	Total MWh	Own use MWh	Export (Sales) MWh
2010	100	228000	2280	226720
2011	100	228000	2280	226720
2012	100	228000	2280	226720
2013	100	228000	2280	226720
2014	100	228000	2280	226720

C9 Estimate of the energy conversion efficiency of the generating station.
20 - 25%

C10 Expected future life of the generating station.
20 Years

SECTION D PARTICULARS OF ANY LONG TERM ARRANGEMENTS WITH PRIMARY ENERGY SUPPLIERS

(To be provided for each generating station separately)

D1 Name of primary energy supplier/s (mining house, colliery or other fuel supplier)
N/A

D2 Particulars of the contractual arrangements with primary energy supplier
N/A

Notes to Section D

Please provide brief particulars of any long term agreements entered into with fuel suppliers.

SECTION E MAINTENANCE PROGRAMMES AND DECOMMISSIONING COSTS

(To be provided for each generating station separately)

E1 Details of any proposed major maintenance programmes, including the expected cost and duration thereof, covering the next six years. Project proposals to state the expected availability, planned outage rate and forced outage rate of the plant over the first five years of operation.
The expected plant availability is 90%.
The expected planned outage rate is 2%.
The expected forced outage rate is 8%.

The maintenance philosophy on the turbine plant will be time based and scheduled annually in accordance with OEM procedures.

The plant will operate under a full maintenance guarantee for the first two years of operation.

It is envisaged that a renewable maintenance contract will be entered into with the OEM on a five year basis thereafter.

E2 Details of any major decommissioning costs expected during the life of the power station and provided for in the project feasibility study.
None

E3 Details of major generating station expansion and modifications planned for in the feasibility study (Dates, cost in current (state year) Rands and description)
Studies are underway to determine the feasibility of expanding WEF 1 from 100MW to 200MW. NERSA will be advised once further details of such expansion, particularly in terms of timing, are available.

SECTION F CUSTOMER PROFILE

(To be provided for each generating station separately)

F1 Particulars of the person or persons to whom the applicant is providing or intends to provide electricity from the generating station and particulars of the distribution of that electricity.
It is envisaged that the energy will be fed into the National Grid at a distribution voltage of 132kV at Eskom's Koekenaap substation.

Notes to Section F

For example, supply to ESKOM or supply to local government distribution system. Please include the details of any power purchase agreements entered into and the price structure of the contract.

SECTION G FINANCIAL INFORMATION

(To be provided for each generating station separately)

G1 Submit projections of and current statements of the accounts in respect of the undertaking carried on by the applicant, showing the financial state of affairs of the most recent period, together with copies of the latest audited annual accounts where such have been prepared.

Please refer to Eskom's Annual report

G2 Submit annual forecasts for the next five years of costs, sales and revenues generated by the project, stating the assumptions underlying the figures.

G3 Estimates of net annual cash flows for subsequent periods (5 years; 10 years; 15 years) sufficient to demonstrate the financial security and feasibility of operating the generating station.

G4 Project financing: Who will finance the project, how is funding split between debt and equity, and what is the terms and conditions of the funding agreements.

It is currently envisaged that Project WEF 1 will be funded from Eskom's pool of funds.

Note: The financial projections should be based on a production plan for the power station and the revenue generated by participating in the electricity market and by bilateral contracts (Power Purchase Agreements) with customers. An integrated resource plan (IRP) is required to demonstrate that the proposed power purchase agreement is the least cost solution available to the electricity purchaser.

SECTION H HUMAN RESOURCES INFORMATION

(To be provided for each generating station separately)

H1 Submit details of the number of staff and employees and their categories in the service of the applicant at the generating station and in any support services separate from the generating station. Also provide information regarding relevant qualifications and experience in critical areas e.g. Government Certificate of Competency.

Staffing will be at the level of approximately 6 permanent staff members for the wind facility. Wind turbine equipment is self despatching with minimal operator intervention being required.

Management	**1 person**
Operating	**1 person**
Maintenance	**4 person**

SECTION 1 PERMISSION FROM OTHER GOVERNMENT DEPARTMENTS OR REGULATORY AUTHORITIES

(To be provided for each generating station separately)

I1 What progress has been made to obtain the required permits and approvals for the generation project. Please note that copies of permits issued by relevant environmental and safety agencies in respect of the operation of the generating station is required for licensing purposes.

- **EIA currently underway - to be submitted to DEAT by early 2008.**
- **All other necessary licenses and permits will be applied for, including but not limited to a water licence for construction purposes**

SECTION J BROAD-BASED BLACK ECONOMIC EMPOWERMENT

J1 Please provide information in terms of the following categories:

COMPONENTS	POINTS	0.5	0.75	1
Direct Empowerment	Black Ownership N/A State Owned	10% to <20%	20% to 50%	>50%
	Black Management	20% to <35%	35% to 50%	**>50%**
	Black Female Management	1% to <5%	5% to 10%	**>10%**
Human Resource Development	Black Skilled Personnel as % of payroll	20% to <35%	35% to 50%	**>50%**
	Skills Development Programs as % of payroll	1% to <5%	5% to 10%	**>10%**
	Employment Equity i.e. Women Representation	**20% to <35%**	35% to 50%	>50%
Indirect Empowerment	Procurement from Black/BEE Suppliers	10%	35% to 50%	**>50%**
	Enterprise Development i.e. Monetary Investment or quantifiable non-monetary support in SMME with BEE contributions as % of Net Asset Value/ EBITDA/Total Procurement	**Non-monetary support as detailed below is provided. Example, Black owned suppliers are paid within 15 days of date of invoice. Black suppliers are requested to price match white suppliers**		
	Industry specific initiatives to facilitate the inclusion of black people in the sector as % of net profit	**1. Mines are required to meet mining charters or demonstrate a willingness to comply** **2. Eskom creates opportunities for Black Suppliers to transport coal to Power Stations** **3. Liquid Fuel Suppliers are required to be BEE compliant or demonstrate willingness to comply**		
NERSA's Discretionary Points	Based on skills transfer and fulfilment or acceleration of other national objectives e.g. employment of disabled personnel robust implementation of mechanisms to verify the BEE status of suppliers reported under preferential procurement and utilization of DTI approved accreditation agencies and so on.	1% to <5%	5% to 10%	>10%

SECTION K ADDITIONAL INFORMATION

Please provide any other relevant information that the applicant wishes to include with this application.

Eskom constructed a wind energy demonstration facility in 2002 (Klipheuwel) to research the applicability of large scale wind generation to Eskom. The facility consisted of 3 turbines, with different technical characteristics and capacities. Two of the units were supplied by the Danish company Vestas, while the 3rd unit was supplied by the French company Jeumont (small supplier part of the Framatome group). The Vestas units incorporate conventional induction generators with gearboxes (mostly used internationally), whereas the Jeumont unit has a permanent magnet synchronous generator without a gearbox (new type technology).

These models were selected so that Eskom could demonstrate the technology and assess the mechanical and electrical performances under local conditions.

Three years of research information ranging from production statistics, daily operational requirements, detailed condition monitoring and national resource understanding and analysis were gathered. The Klipheuwel 3.2MW installation generates about 4GWh annually with an availability of 90% and an Energy Utilisation Factor (EUF) of 16%.

The project was a major success and results of the research provided Eskom with immediate technical benefit and valuable strategic information to assist it in achieving its long-term aspirations of harnessing Renewable Energy (RE) power generation. Wind is the only commercially stable RE technology immediately accessible to Eskom, off the shelf, with short lead times- a wind facility can be operational within 18 to 24 months.

A national wind atlas for South Africa was compiled in conjunction with the Department of Minerals and Energy (DME) and The Council for Scientific and Industrial Research (CSIR) as a part of Eskom's wind research programme. 114 weather stations throughout South Africa were audited to international standards for this exercise. From this database, six sites were identified as high potential areas that could in future be looked at for commercial development. High-accuracy meteorological measurement stations have been erected at these sites and monitoring continues.

South Africa can be considered as having a moderate wind resource as compared to Northern Europe (Scandinavia), Great Britain & Ireland, New Zealand and Tasmania. Typical wind speeds range between 4-7m/s around the Southern, Eastern and Western Coastline annually. This relates to an expected annual EUF of about 16-28%, the value depending on the specific site selected.