



APPLICATION FOR AN ELECTRICITY GENERATION  
LICENCE IN TERMS OF THE ELECTRICITY REGULATION  
ACT, 2006 (ACT NO. 4 OF 2006).

Please return completed form to:

HOD: Electricity Licensing and Compliance  
National Energy Regulator of South Africa  
Kulawula House, 526 Vermeulen Street  
Arcadia, 0083  
Pretoria

Or:

HOD: Electricity Licensing and Compliance  
National Energy Regulator of South Africa  
P.O. Box 40343  
Arcadia  
0007

Tel (012) 401 - 4600  
Fax (012) 401 - 4700

**SECTION A                    PARTICULARS OF APPLICANT**

A1     Full name of applicant (business name) and business registration number:

Eskom Holdings SOC Ltd, Registration Number: 2002/015527/30

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

Megawatt Park, Maxwell Drive, Sunninghill, Sandton

Postal address:

P O Box 1091, Johannesburg, 2001

A3     Telephone number of applicant:

(     ) REDACTED

A4     Fax number of applicant

(     ) \_\_\_\_\_

A5     Email address of applicant: REDACTED

A6     Contact person:

First name: REDACTED

Surname:     REDACTED

Telephone No: \_\_\_\_\_

Mobile No: REDACTED \_\_\_\_\_

Fax No.:        \_\_\_\_\_

Email address: REDACTED; Cc: REDACTED

A7 Legal form of applicant:

Eskom, a State Owner Company, is a juristic person established in terms of an act of parliament, being the Eskom Conversion Act 13 of 2001.

Shareholder: Minister of the Department of Public Enterprises (DPE) as the shareholder representative.

Current Directors (as of date of signature herein):

- Mr Mteto Nyati (Chairperson)
- Mr Calib Cassim (Acting Group Executive)
- Mr Martin Buys (Acting Group Chief Financial Officer)
- Dr Rod Crompton (Independent non-executive director)
- Dr Busisiwe Vilakazi (Independent non-executive director)
- Dr Claudelle von Eck (Independent non-executive director)
- Dr Tsakani Mthombeni (Independent non-executive director)
- Ms Ayanda Mafuleka (Independent non-executive director)
- Mr Bheki Ntshalintshali (Independent non-executive director)
- Mr Clive Le Roux (Independent non-executive director)
- Ms Fathima Gany (Independent non-executive director)
- Mr Leslie Mkhabela (Independent non-executive director)
- Mr Lwazi Goqwana (Independent non-executive director)
- Ms Tryphosa Ramano (Independent non-executive director)

**Note to Section A**

- 1) 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.
- 2) 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 company registration number are required.
- 3) Also provide shareholding information of the company.

**SECTION B                    COMMENCEMENT DATE OF LICENCE**

B1      Desired date from which the licence (if granted) is to take effect:

28 February 2024. This would allow for the timely placement of contracts as well as the procuring of long lead time items.

**Note to Section B**

- 4) The normal processing time for a licence application is 120 days once all relevant information has been provided and there are no objections received.
- 5) If the applicant intends operating more than one generation station under the proposed licence, please complete separate application forms for each generation station.

## SECTION C                    PARTICULARS OF PROPOSED GENERATION STATION

C1     Name of generation station:

Sere PV

Note: This is the working name. A final name will be chosen at a later date.

C2     Geographical location of generation station (please attach maps) and GPS coordinates (x<sup>0</sup>xx'xxx" S, y<sup>0</sup>yy'yyy" E):

31°31'9.16" S, 18° 6'22.43" E

C3     Address of generation station:

Located within Eskom Sere Windfarm, situated in the Matsikamma local municipality, Western Cape Province.

C4     Contact person at generation station:

First name and Surname:     REDACTED

Telephone No:

Mobile No:                     REDACTED

Fax No:

Email address:                 REDACTED

C5     Type of generation station (thermal, nuclear, hydro, pumped storage, gas turbine, diesel generator or other) (Please specify):

Solar Photovoltaic (PV) Power

C6     Expected commissioning date for a proposed generation station or at which the station was commissioned (if an existing station). Also state construction period required if applicable:

A construction period of 9 months is anticipated. Commissioning is targeted for March 2025.

C7     The installed capacity (existing and/or planned) of each unit within the generation station (MW):

Existing Capacity (Nameplate rating):

The new PV facility will be located at a site where there is an existing wind power plant (SERE Power Station with 105.8MW of operational capacity).

Planned Capacity (nameplate rating):

The limit of the plant as granted by the EIA is generation capacity of 19.5MW. However, current internal feasibility studies indicates 16MW based on the EIA approval on the land which is restricted at 20 hectares. Plant capacity to be firmed up once the EPC contractor is appointed and a detailed design of the plant is performed. This will be further confirmed by the commissioning and testing.

- C8 Maximum generation capacity (MW) expected to be available from the generation station and energy to be produced (MWh) over the next 5years 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:

NOTE: The below is based on the internal feasibility studies of 16MW, however, the MW could increase to a maximum of 19.5MW.

YEAR	Max MW	Total MWh	Own use MWh	Export (Sales) MWh
2025	16 MW	36 050	-21.95	36 028
2026	16 MW	35 914	-21.96	35 892
2027	16 MW	35 777	-21.96	35 755
2027	16 MW	35 639	-21.96	35 617
2028	16 MW	35 501	-21.96	35 479

- C9 Estimate of the energy conversion efficiency of the generation station/ Capacity factor where applicable:

Capacity factor of 23.89% from Commissioning to 2038 and 25.7% from 2039.

- C10 Expected future life of the generation station:

The expected life span of the plant is 25 years.

**Note to Section C**

Also provide additional technical information of the project as separate attachments. This should give the technology used, technical feasibility studies e.g. radiation studies for Solar projects or wind studies for Wind projects, connection to the grid arrangements, single line diagrams of the network connection as well as single line diagrams of the generation station, etc. Also attach fuel supply/ wheeling/ connection consents/ agreements where applicable (if you are going to use someone else’s network).

This information is also used as technical inputs to the financial model of the project, e.g. solar radiation studies will determine the amount of power that can be generated.

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

D1     Name of primary energy supplier/s (mining house, colliery or other fuel supplier)  
if applicable:

Not Applicable

D2     Particulars of the contractual arrangements with primary energy supplier if  
applicable:

Not Applicable

**Notes to Section D**

- 6) Please provide brief particulars of any long term agreements entered into with fuel suppliers and copies of such contracts (Signed Fuel Supply Agreements).

## SECTION E MAINTENANCE PROGRAMMES AND DECOMMISSIONING COSTS

E1 Details of any proposed operation and maintenance programmes, including the expected cost and duration thereof, covering the lifespan of the project. Project proposals to state the expected availability, planned outage rate and forced outage rate of the plant over the life span of the project. Additional information may be provided as an attachment.:

A maximum of 99% availability is anticipated without curtailment, detailed information is also provided on the document attached called Sere PV Project Bankable Business Report on page 12 to 13.

In order to estimate the expected performance of the Sere PV Project, two possible conceptual solutions were developed, that were considered to satisfy the identified constraints:

- A 16MW PV plant, where the PV modules are mounted at a fixed tilt of 30 degrees to the ground, facing north
- A 14MW PV plant, where the PV modules are mounted on single-axis tracking mechanisms, rotating about an axis to approximately track the daily movement of the sun across the sky, from east in the morning to west in the evening. The single-axis tracking configuration requires a slightly larger footprint than the fixed-tilt solution, hence the reduced PV capacity to fit within the identified 20ha constraint.

If the generation capacity from both the PV plant and the Wind Farm exceeds the set constraint of 105.8MW, the PV generation will be curtailed. To estimate the potential PV plant curtailment and impact on expected performance (lost energy), the historic plant data from Sere Wind Farm for the year 2017 was superimposed with the expected performance from the PV plant conceptual solutions, and curtailment applied to the PV plant output to constrain the combined output to 105.8MW. The expected performance parameters and level of curtailment is summarised in Table 1 below.

Table 1 Estimated Production Outputs

	16MW PV Plant Fix Tilt	14MW PV Plant single-axis tracking
Installed PV Capacity [MW]	16	14
Annual Net PV Energy Generation (no curtailment) [MWh]	36027	35338
PV plant Capacity Factor (no curtailment) [%]	25.7	28.8
Curtailed Energy (2017 output data) [MWh]	2545	2573
Curtailed Energy (2017 output data) [%]	7.1	7.3
Annual Net PV Energy Generation (after curtailment) [MWh]	33482	32765
PV plant Capacity Factor (after curtailment) [%]	23.9	26.7



E2 Details of any major decommissioning costs expected during the life span of the power station and provided for in the project feasibility study:

Towards the end of the operational life of the station, studies will be conducted to evaluate the feasibility of extending its life or decommissioning of the plant.

E3 Details of major generation station expansion and modifications planned for in the feasibility study (Dates, Costs in Rands (state year) and description):

Not Applicable

## **SECTION F                      CUSTOMER PROFILE**

- F1      Particulars of the person or persons to whom the applicant is providing or intends to provide electricity from the generation station. Explain relationship between buyer and seller if any:

The electricity will be utilised internally in Eskom with supply through Eskom Distribution in the Free State Province. At the time of this application Eskom Distribution is a division of Eskom Holding SOC Ltd.

- F2      Network connection details (connection points, voltages, wheeling arrangement, single line diagram). Please attach connection cost estimate letters and / connection consents if not owner of the network:

Sere Solar PV will be connected on the existing Eskom Distribution Skaapvlei Substation. A new 20/40MVA 132/22kV transformer will be installed to evacuate power to the existing 132kV kingbird line to Juno Substation. The cost estimate letter is attached.

- F3      Provide summary details of Power Purchase Agreements with customer including purchasing price etc. (Please attach Power Purchase Agreements):

See F1 above. Supply will be to Eskom through the Eskom Distribution Division. No power purchase agreements has been drafted at this stage.

### **Notes to Section F**

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

## SECTION G FINANCIAL INFORMATION

REDACTED

- 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 Financial Statements for the year ended 31 March 2023. The integrated results are published in Eskom's website: <https://www.eskom.co.za/investors/integrated-results/>.

- G2 Submit the financial model in excel format of the proposed generation facility for the lifespan of the project, showing the funding (Equity/ Debt ratios) and their cost, cost of the project, sales and revenues generated by the project, stating the assumptions underlying the figures. A separate write up must be provided to explain the financial information on the model.

REDACTED

- G3 Estimates of net annual cash flows for the lifespan of the project sufficient to demonstrate the financial security and feasibility of operating the generation station:

REDACTED

- 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. In addition, also fill in table below:

REDACTED

### Notes to Section G

- 8) The financial projections should be based on a production plan for the generation station and the revenue generated by participating in the electricity market and by bilateral contracts (Power Purchase Agreements) with customers. Reference to the latest version of National Integrated Resource Plan (IRP) is required to demonstrate that the proposed power purchase agreement is the least cost solution available to the electricity purchaser.
- 9) Evidence of compliance with the Integrated Resource Plan (IRP). If the proposed plant is not in the IRP, the applicant must obtain Ministerial approval for deviation from the IRP in accordance with Section 10(2)g of the Electricity Regulation Act, 2006 (Act No. 4 of 2006). This approval is granted by the

Minister of Energy so applicant must contact the Department of Energy for this approval. The DDG: Policy would be the contact person at DoE. Sometimes the Minister gives a blanket approval, and applicants are encouraged to contact NERSA for the latest update on what is exempted.

## SECTION H HUMAN RESOURCES INFORMATION

H1 Submit details of the number of staff and employees and their designation (not names, e.g. three professional engineers registered with ECSA, two clerks etc) in the service of the applicant at the generation station and in any support services separate from the generation station. Also provide information regarding relevant qualifications and experience in critical areas e.g. Professional registration (Engineering Council of South Africa – ECSA), Government Certificate of Competency:

Human Resources should comply with BBEEE policy or the requirements of the Request for Proposal (RfP) documents if the project is as a result of a tendering procurement process, e.g. the DMRE Renewable Energy Independent Power Producer Procurement (REIPPP) process. The applicant should give the number of employees that will be employed during project construction, operation and maintenance.

All this information should be submitted as an attachment.

Below is the table of proposed human resource for the Operation & Maintenance (O&M) of this planned 19.5MW Solar PV power station.

Table 4: Manpower numbers during O&M

**REDACTED**

The process of RfP and the BBEEE requirements will be enforced as per South African National Treasury Requirements, and other South African Government regulations and conditions that all State owned company should complied with when engaging on the procurement process.

**SECTION I                      PERMISSION        FROM        OTHER        GOVERNMENT  
DEPARTMENTS OR REGULATORY AUTHORITIES**

I.        What progress has been made to obtain the required permits and approvals for the generation project? Please provide copies of permits issued in respect of the operation of the generation station such as Environmental Authorisations, Water Use Licence, Civil Aviation Authority Approval, etc. (this is depended on technology used):

- Environmental Approval valid till November 2032 (Department Forestry Fishery and Environmental)
- Department of Mineral, Resources & Energy -Section 34 Allocation granted in November 2022. - NERSA concurrence issued in Media Statement dated 29 May 2023 the decision to concur with the Section 34 Determination as taken in meeting held on 25 May 2023

**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	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	20% to <35%	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	10% to <20%	20% to 25%	>25 %
	Industry specific initiatives to facilitate the inclusion of black people in the sector as % of net profit	1% to <5%	5% to 10%	>10%
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%

\*Please refer to the attached BBBEE verification report.

## **SECTION K                    ECONOMIC INFORMATION**

Please state the economic benefits of the project to the local community and to South Africa as a whole. If there are Economic Development Commitments made, they must be stated here or be provided as attachments if the files are big, but in such cases, there should be a brief summary:

This new generation project aims to address the power shortage that affects the economy of the country.

During construction it is anticipated that about 100 to 150 skilled and unskilled labour will be employed by this project. During operation a total of 11 permanent staff and also opportunities for small industries to provide services like PV Modules cleaning.

Eskom developed eight strategic imperatives, three of which have been pivotal in driving the Generation Business.

The three strategic imperatives are as follows:

- Reducing our environmental footprint and pursuing low carbon growth opportunities.
- Securing our future resource requirements, mandate and the required enabling environment.
- Leading and partnering to keep the lights on.

It is to this end that opportunities in renewables have been identified to support the above imperatives for power generation. Adding generating capacity at the Sere wind farm aligns with Eskom's new business model and turnaround plan in setting up the Generation division for growth by focusing on large, utility scale renewables. This project feeds into the JET strategy and program that is aimed at shifting to renewables plan to provide a foundation for reliable supply while complying with carbon and particulate emission targets in an increasingly competitive environment.



## **SECTION L                    ADDITIONAL INFORMATION**

Provide any other relevant information related to this application:

The country is currently experiencing load shedding as a result of generation capacity constraints. This is due to numerous factors, one being a lack of additional generation capacity being added to the Grid. Eskom is exploring opportunities to address the current supply side inability to meet demand through additional renewable generating capacity and has embarked on many initiatives to support expansion into renewables through a combination of technologies including Wind, Solar PV and Battery Energy Storage System (BESS).

As one such initiative, Eskom has explored expanding the Sere wind farm. There is no opportunity to add additional wind turbines at this site, but the site lends itself to expansion through photovoltaics (PV). The benefits associated with the implementation of PV at Sere include utilising existing infrastructure to reduce costs in establishing a hybrid wind and solar facility, while benefitting from concessional funding from development financing institutions (DFIs) to achieve a competitive levelized cost in reducing Eskom's carbon footprint. In addition, line losses will be reduced by generating closer to a load centre.

Given the Transmission constraints in the area, a phased approach is adopted in expanding the site. The current phase, which is the basis for this application, seeks to add 19.5 MW PV, connected to a new standalone transformer within the existing Skaapvlei Substation.

This capacity is aligned to IRP-2019 on PV and the transition to renewable energy. The project is part of the presidential strategic infrastructure portfolio of projects, given its urgency and strategic. In addition, the project falls within the Project Vulindlela as established by the Presidency to address the capacity shortage in the country.

**SECTION L                    DECLARATION**

On behalf of the applicant, I hereby declare that:

- (a) the applicant shall at all times comply in every respect with the conditions attached to any licence that may be granted to the applicant;
- (b) the applicant shall at all times comply with lawful directions of the National Energy Regulator of South Africa;
- (c) the information provided by me on behalf of the applicant is accurate and complete in all respects; and
- (d) I am authorised to make this declaration on behalf of the applicant.

Signed:

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Full name(s) of Signator(y/ies):

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Position held (if the applicant is a company, co-operative, partnership, unincorporated association or any other body corporate):

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Date:

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