



APPLICATION FOR A GENERATOR
CONNECTION TO THE ESKOM
NETWORK

October 2013

Introduction

(This form should be completed if the generator in question will be synchronised with the Eskom grid.)

This application form outlines the minimum information required by Eskom to conduct an evaluation of the feasibility of connecting generators within Eskom's networks.

This application form is in two parts.

1. Part 1 must be filled in for Eskom to provide an (non-binding) estimate of the cost of connection.
2. If the required conditions are met to proceed with a budget quotation, Eskom will request Part 2 of the application form to be completed for the detailed interconnection and power system studies.

Due to the huge difference between the number of requests received for Cost Estimate Letters which are subsequently issued and the requests for budget quotations which are issued following acceptance of the Cost Estimate Letters, it has become necessary for Eskom to raise a Cost Estimate Fee paid prior to the issue of the Cost Estimate Letter, Proof of payment of the Cost Estimate Fee is required within 10 working days of submitting the application form part 1 where after Eskom will commence with the cost estimate studies. The invoice for payment will be issued within a day of receipt of application form.

All of the information stipulated in this application form must be provided prior to the commencement of any work required to prepare a Cost Estimate Letter and ultimately if approved, any Budget Quotation. The technical cost of connection as well the network charges are determined for the applicant from the information supplied in this document. Technical findings and constraints derived from the provided information shall also be communicated to the relevant applicant.

If applicable, should the import capacity required by the site during start-up, result in a demand being required or an existing plant's notified maximum demand being exceeded, an application for the demand shall also be submitted to Eskom. Applicants should also note that an application for a temporary construction supply or for an increase in demand is separate from this application, and the applicant is required to follow the standard Eskom application process.

It should be noted that it is the applicant's responsibility to comply with the applicable technical, design and operational standards detailed in the South African Grid Code and the South African Distribution Code. Copies of the codes may be downloaded from NERSA's website www.nersa.org.za.

Eskom Distribution's specific technical requirements for the interconnection of embedded generation are described in a separate document, i.e. "Distribution standard for the interconnection of embedded generation" (DST 34-1765). A copy of this standard will be provided on request. This application form may be completed as a hard copy or as a soft copy together with all supporting documentation. An electronic (soft copy) submission is preferred and can be submitted to the following email addresses:

You will be contacted to confirm receipt of your application and provided with a reference number.

Region 1	Western Cape	Mr Are van Zyl are.vanzyl@eskom.co.za Mr Bradley Box bradley.box@eskom.co.za Ms Livhuwani Nedzingahe livhuwani.nedzingahe@eskom.co.za
	Eastern Cape	Mr Eddie Leach eddie.leach@eskom.co.za Ms Tembi Plaatjie tembi.plaatjie@eskom.co.za
Region 2	North West	Mr Valmon Muller valmon.muller@eskom.co.za
	Northern Cape	Ms Lebohang Motai lebohang.motoai@eskom.co.za
	Free State	Ms Lebohang Motai lebohang.motoai@eskom.co.za
	Kwa-Zulu Natal	Mr Ravi Moonsamy Ravi.moonsamy@eskom.co.za Ms Zanele Kamwendo zanele.kamwendo@eskom.co.za
Region 3	Gauteng	Mr Valmon Muller valmon.muller@eskom.co.za Ms Lorato Loate lorato.loate@eskom.co.za Mr Modikoe Mkhene modioe.mkhene@eskom.co.za
	Limpopo Mpumalanga	Mr Valmon Muller valmon.muller@eskom.co.za Ms Helen Bezuidenhout helen.bezuidenhout@eskom.co.za



See map for the Eskom Grid Access Regions →

For office use

Received by	
Date received	
Allocation of tracking GTX or project number	

Eskom application form for a generator connection

Important information:

Note 1: Eskom will provide a Cost Estimate Letter within 90 days of receiving the proof of payment of the Cost Estimate Fee and the application form. This period is however influenced by each project's complexities and dependencies and amount of initial Engineering Planning that needs to be done for each project. The following conditions should be complied with:

- Completion of Part 1 of the application form;
- Reasonable assurance of the right to develop on a proposed site, e.g. letter from landowner; and
- Environmental impact assessment (EIA) activities initiated and acknowledgement by Department of Environmental Affairs (DEA) of application.
- Proof of payment of the Cost Estimate Fee (please see Cost Estimate Fees below)

Note 2: Once the application has been submitted, Eskom may contact you to discuss the following:

- where should facility be connected;
- grid configuration and voltages to use;
- estimated costs of connection – based on proper network configuration and equipment boundaries and details;
- grid capacity available at nearest network;
- fault levels at nearest network;
- define need to coordinate projects, determine requirements / risks for shared networks;
- any potential Eskom plans that may impact on project proposals;
- any impact (e.g. lead times) on requested timetable; and
- Eskom to determine interdependent projects in public domain (as far as possible) (liaising with EIA consultants, DEA, NERSA, etc.).

Note 3: Eskom will request Part 2 of this application form to be filled in and proceed with a budget quotation only after the following conditions have been complied with, namely:

Where the Independent Power Producer (IPP) intends to submit bids in a regulated IPP purchase programme:

- the entity responsible for procurement has to first pre-qualify the application.

For IPP applications that do not intend to be part of a regulated bid programme:

- a letter from NERSA indicating engagement on an application for a licence;
- acceptance of the cost estimate conditions and the payment of the quotation fee;
- completion of Part 2 of the application form;
- proof of land ownership/permission to use the land obtained;
- EIA progress, i.e. appointment of EIA consultant and confirmation from DEA approving the Scoping Report or Basic Assessment Report as may be applicable; and
- proof of reasonable viability of the proposed technology regarding the primary energy source.

Environmental Requirements:

Be aware of the fact that Statutory Approvals from all infrastructure providers and utilities are required for the building of the generation plant and associated activities, and that infrastructure traversing land needs to be protected by a servitude/s registered against the Title Deed of the affected property.

In order to expedite your connection, you are advised to, as far as possible, integrate the environmental impact assessment (EIA) for the generation plant with the EIA for the Eskom connection assets. You need to discuss the requirements and coordination of the EIA for the Eskom connection assets with Eskom, e.g. route selection, design, evaluation and ranking of alternatives,

environmental management plan (EMP) for the construction and operational phase(s), servitude conditions.

Cost Estimate Fees(2013/14 – updated annually)

The following Cost Estimate Fees are applicable for the following maximum export capacity and are based on Engineering Council of South Africa (ECSA) engineering rates and estimated work required to prepare a Cost Estimate Letter for each of the following project sizes:

- | | |
|--------------------------|---------------------------|
| • Micro: 0 – 350 KW | No cost estimate required |
| • Small: > 351 KW – 1 MW | R13 000 |
| • Large: > 1 MW – 50 MW | R52 000 |
| • Key: > 50 MW | R78 000 |

Once you have submitted the application form, please request an official Eskom invoice, which will have the application reference number against which the payment must be made at the Eskom banking account which will also be provided on the invoice.

Applicability of Cost Estimate Fee

Cost Estimate Fee is applicable to:

- New applications
- Changes in supply capacity – existing customers

Cost Estimate Letters are issued for major works projects only. Where an upgrade in supply size occurs which entails additional work being done and additional costs being incurred, a Cost Estimate Letter would need to be prepared upon payment of a Cost Estimate Fee.

However, where an upgrade in supply occurs which involves only a system change and no actual work has to be undertaken, this would not be considered a major works project. In this case the Cost Estimate Fee would not be payable and the applicable Standard Charge for the upgrade in supply would be charged.

- Change in scope requested by the customer

A new Cost Estimate Letter will be required to be issued in cases where a customer requests a change in scope for a project. A Cost Estimate Fee will be payable for the new Cost Estimate Letter that is to be issued.

- Quotation fee validity period

A new Cost Estimate Fee will be payable where the quotation fee validity period has expired and a new Cost Estimate Letter is requested by the customer

Part 1 – Application Form

DETAILS OF APPLICANT									
1. Application relationship	Developer <input checked="" type="checkbox"/> Consultant <input type="checkbox"/> Landowner <input type="checkbox"/> Other (specify): _____ _____								
2. Full name of applicant(s) / lead developer Customer title and full first names: Customer's initials Surname/Company name Note that if there is more than one developer, as much information as possible should be provided	Blackwood Solar Energy Facility (Proprietary) Limited								
3. Identity number or Company/Close Corporation registration number	Registration Number 2011/103612/07								
4. Date of submission	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">0</td> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">9</td> </tr> </table>	2	0	1	3	1	2	1	9
2	0	1	3	1	2	1	9		
5. Do you intend to submit a bid in terms of a regulated power purchase procurement process (e.g. REFIT)	YES								
6. If YES, provide the name of the programme	Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)								
7. If NO, indicate if it is for own use and/or a wheeling transaction or other	n/a								
8. Address of the application(s) or in the case of a company or corporate body, the registered address:									
Street:	Mazars House								
Street:	Rialto Road								
Suburb:	Grand Moorings Precinct								
City:	Century City, Cape Town								
Postal Code:	7441								

9. Postal address	P O Box:	PO Box 51884
	City and Country:	Waterfront
	Postal Code:	8002
10. Contact address if different from above:	Street:	Unit 106, 1 st Floor, Block A
	Street:	7 West Quay Road, West Quay Building
	Suburb:	Waterfront
	City:	Cape Town
	Postal Code:	8001
11. Name of contact person	David Peinke	
12. Phone number of contact person	021 446 7084	
13. Alternative phone number	084 401 9015	
14. Fax number of contact person	021 446 7090	
15. Email of contact person	david.peinke@ventusaenergy.com	
16. Please nominate a preferred name for this project/facility. Eskom will take this preferred name into consideration when determining the facility's station name but reserves the right to change it in order to avoid any potential for confusion with other projects or stations. Please use a single word or short name for use in databases – to avoid potential abbreviations.	Blackwood Solar Energy Facility	
GENERAL DETAILS		
17. Connection point detail:	New point <input type="checkbox"/>	Existing point <input type="checkbox"/>
	Eskom <input checked="" type="checkbox"/>	Municipal supply area <input type="checkbox"/>
	Specify: _____	
18. If an existing Eskom point is to be used, please provide customer account number.	n/a	
19. Has the applicant previously had a study completed by Eskom regarding this facility?	YES.....	<input type="checkbox"/>
	NO.....	<input checked="" type="checkbox"/>
20. If yes, please specify the title, date of issue and issuing department of the pre-feasibility study(s).	The Developer held initial discussions with Eskom (Bloemfontein) during which meeting it was indicated that a loop in/out of the 132 kV KIMBERLEY DS - SKIETPAN SWITCHING STATION would be the most feasible connection option. The Developer later appointed Trans-	

	Africa Projects to undertake a grid connection and load flow study that further confirmed connection. The <u>Alternative</u> connection option is to run a 132 kV HV line back to Boundary Substation, parallel for most of the way.																																												
21. Target connection date (this date will be used for connection assessment).	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2</td><td>0</td><td>1</td><td>7</td><td>0</td><td>1</td><td>0</td><td>1</td> </tr> </table>	2	0	1	7	0	1	0	1																																				
2	0	1	7	0	1	0	1																																						
22. Provide preference in terms of construction of assets:	<p>Eskom to construct assets..... <input type="checkbox"/></p> <p>Negotiated self-built project transferring assets to Eskom..... <input checked="" type="checkbox"/></p> <p>Negotiated self-built project with developer retaining ownership of assets..... <input type="checkbox"/></p>																																												
MAPS AND DIAGRAMS																																													
<p>23. Please indicate coordinates for on-site grid electrical connection.</p> <p>Use WGS84 datum coordinates in following format: dd°mm'ss.s” (Degrees, Minutes, Seconds)</p>	<p>On-site Generator connection point:</p> <p>Latitude <table border="1" style="display: inline-table;"><tr><td>S</td><td>2</td><td>8</td><td>°</td><td>5</td><td>2</td><td>'</td><td>5</td><td>6</td><td>.</td><td>s</td></tr></table></p> <p>Longitude <table border="1" style="display: inline-table;"><tr><td>E</td><td>2</td><td>4</td><td>°</td><td>5</td><td>6</td><td>'</td><td>2</td><td>6</td><td>.</td><td>s</td></tr></table></p> <p>Electrical connection point (where known):</p> <p>Latitude <table border="1" style="display: inline-table;"><tr><td>S</td><td>2</td><td>8</td><td>°</td><td>5</td><td>2</td><td>'</td><td>5</td><td>3</td><td>.</td><td>s</td></tr></table></p> <p>Longitude <table border="1" style="display: inline-table;"><tr><td>E</td><td>2</td><td>4</td><td>°</td><td>5</td><td>5</td><td>'</td><td>3</td><td>8</td><td>.</td><td>s</td></tr></table></p>	S	2	8	°	5	2	'	5	6	.	s	E	2	4	°	5	6	'	2	6	.	s	S	2	8	°	5	2	'	5	3	.	s	E	2	4	°	5	5	'	3	8	.	s
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24. Please provide reasonable assurance of the right to develop on a proposed site, e.g. letter from landowner.	Copy of Option to Lease Agreement attached.																																												
<p>25. Please provide a map, with the location of the facility, and relationship to an identifiable landmark clearly marked.</p> <p>Add the marked electrical connection clearly to the grid in map format and properties to be crossed – i.e. map showing IPP site, power line and substation and connection to grid layout, if available.</p> <p>Indicate how many land parcels are traversed by the proposed development and associated activities (the Generation site as well as the interconnecting network). Provide the farm name(s), farm number and portion number e.g. MyFarm 123/0, YourFarm 124/1 (indicate multiple farm numbers as required).</p> <p><i>Name of map attachment (soft copy):</i></p>	<p><i>If GIS shape files are available, that might be submitted as well (*.shp, *.shx, *.dbf, *.prj) Minimum file requirements might have to be listed.</i></p> <p>See attached EIA Locality Map.</p> <p>See attached preliminary site layout in .kmz format, showing connection points between the site substation and the loop in/out connection point on the 132 kV KIMBERLEY DS - SKIETPAN SWITCHING STATION line.</p> <p>The .kmz also shows the alternative Connection option, being a ± 20 km HV line back into Boundary Substation, in the event that capacity is taken by a competitor.</p> <p>The 132 kV KIMBERLEY DS - SKIETPAN SWITCHING STATION line crosses the property in question. Therefore only one property is concerned with the proposed solar farm development as well as HV electrical line servitudes into the 132 kV KIMBERLEY DS - SKIETPAN SWITCHING STATION line. The Alternative option crosses a number of properties, servitudes of which will need to be secured.</p>																																												
26. If known please provide the name of the Eskom substation from which	n/a																																												

existing supply (if applicable), is taken. Alternatively provide the nearest pole number.	
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TECHNICAL DATA

27. Please indicate the required reliability of the connection, e.g. n-1.	N-1 preferable. Please discuss with the Developer to avoid excessive cost estimates.	
28. For a new plant, provide the fault current (MVA) contribution of the generating facility at the Point of Connection.	75 MVA (to be discussed with the Developer)	
<p>29. Existing supply point:</p> <ul style="list-style-type: none"> · For an existing load provide the notified maximum demand (NMD) (typically for co-generation), of the load. · If an existing plant, what is the existing fault current contribution and what will the new fault current contribution in MVA be. 	n/a	
30. Please provide details of the technology type and size.	Technology	Maximum exporting capacity (MW)
	Wind	0
	CSP trough	0
	CSP tower	0
	PV	75
	Concentrating PV	0
	Landfill	0
	Biomass	0
	Biogas	0
	Hydro or small Hydro	0
	Coal	0
	Gas	0
Other (specify)	0	
<p>31. Provide the project phases/time lines.</p> <p>Indicate short-term and long-term MW phasing of the project e.g. phase 1 a total of 50 MW with 1st turbine being commissioned in 2014 and final commissioning by 2016, phase 2 a total of 100 MW with 1st turbine being commissioned in 2016 and final commissioning by 2018. This will help to determine required network capacities and highlight potential development risks.</p>	<p>Approximate timeline as follows:</p> <p>Round 4 Bidding: 18 Aug 2014</p> <p>Preferred Bidder Announcement: 28 October 2014</p> <p>Financial Close: 9 July 2015</p> <p>Break ground: ± Aug 2015</p> <p>Complete facility commissioned: ± Jan 2017</p>	

Part 2 – Project Form

Eskom will contact you to request this section of the application form to be completed once all the required conditions are fulfilled. This section is to be completed in order for Eskom to proceed with a Budget Quotation.

ENVIRONMENTAL INFORMATION	
32. Is a waste license required and if so what is the status of the application?	
33. Is an emissions license required and if so what is the status of the application?	
34. Is an integrated water use license required and if so what is the status of the application?	
35. Are there appeals and/or legal reviews against any environmental authorisation? If so, what is the status?	
36. Does the EIA application include all associated activities including one for the power line connection to the Eskom grid? (State all listed activities applied for.)	
37. If EIA and/or other environmental authorisations (waste, water, air quality) have been initiated, please provide name of environmental consultant.	
38. Provide proof of landowner consent, to avoid requests for duplicate quotations on same land or very close proximity.	
39. Highlight potential risks of project, e.g. wetlands, proximity to airports, mining activities, prospecting licences, etc.	

SITE DATA	
40. Has agreement been reached between the applicant and all registered landowners affected by the proposed development and associated activities?	
41. Provide a site plan in an appropriate scale. This site plan should indicate: <ul style="list-style-type: none"> a) The proposed location of the connection point and associated activities, (normally at the HV bushings of the grid connected transformer) b) Generators c) Transformers d) Site buildings <i>Name of site plan attachment (soft copy):</i>	
42. Does your proposed development impact on any existing infrastructure such as utilities, telecommunications, rail, roads, water? Please specify.	
PROJECT PHASES	
43. Provide the updated project phases/ time lines. Indicate short-term and long-term MW phasing of the project e.g. phase 1 a total of 50 MW with 1 st turbine being commissioned in 2014 and final commissioning by 2016, phase 2 a total of 100 MW with 1 st turbine being commissioned in 2016 and final commissioning by 2018. This will help to determine required network capacities and highlight potential development risks.	
CONSTRUCTION SUPPLY REQUIREMENTS	
44. Provide details of construction supply requirements in kVA, voltage and location. Please note that a separate electrical supply application will be required in this regard.	