

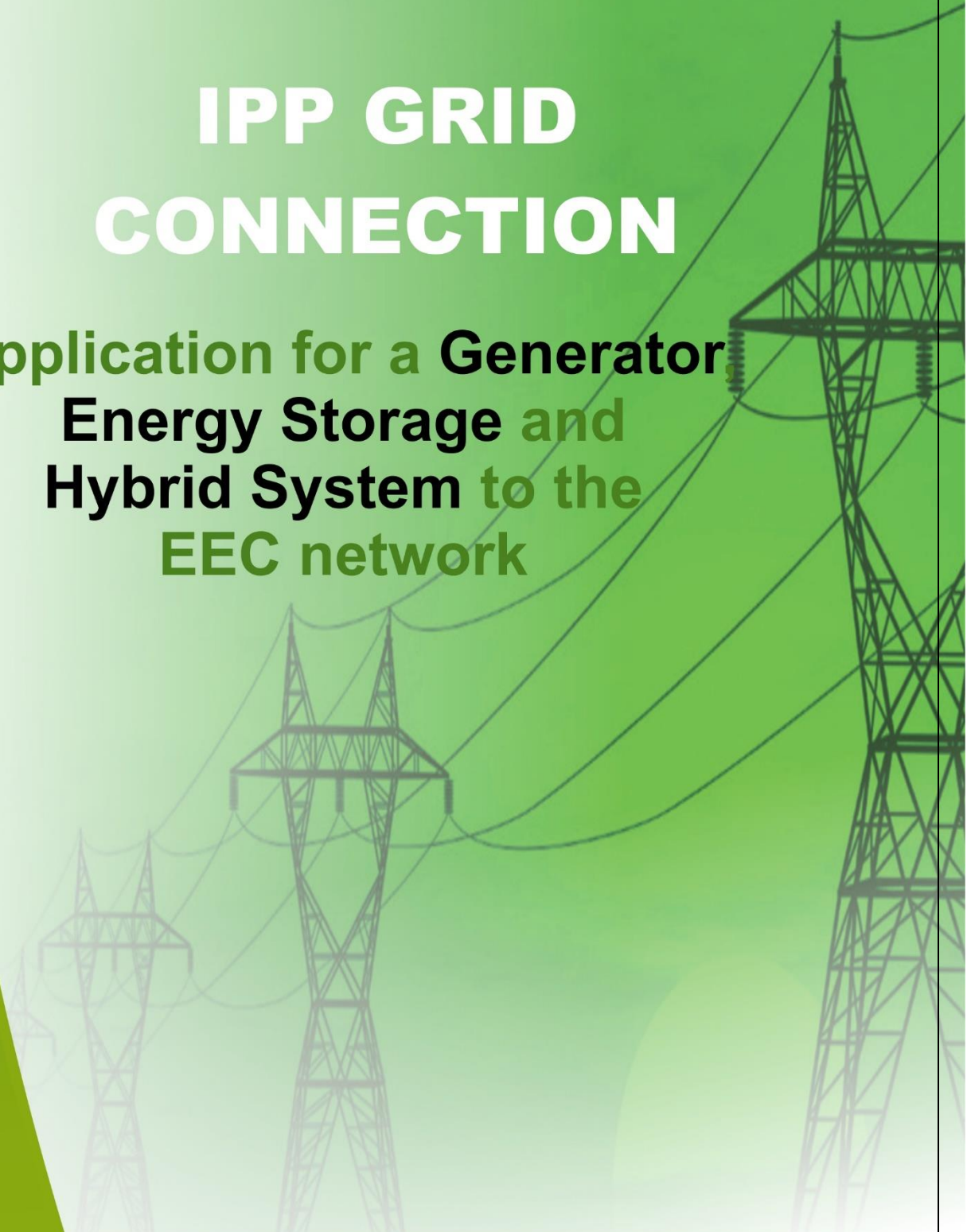


**Eswatini
Electricity
Company**

Energy For The Future

IPP GRID CONNECTION

**Application for a Generator,
Energy Storage and
Hybrid System to the
EEC network**



GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No, Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 2 of 15	<u>Authorised by:</u> GM Research and Development

GRID CONNECTION APPLICATION FORM

This application form specifies the minimal data that EEC needs to assess if it is feasible to connect a hybrid or generator or energy storage capacity that will also draw power within the same EEC network point of connection.

Introductions

This Application Form should be completed if the generation plant under consideration will be synchronised with the EEC grid and is of an Independent Power Producer (IPP) status. This does not cover embedded generation connections; a separate EEC embedded generation document is available on the EEC website, www.eec.co.sz, and describes the connection requirements and processes to be followed. In the event that the Applicants require temporary construction supply or an increase in demand, the normal EEC application process should be adhered to separately. In addition, the *Eswatini Grid Codes* and *Grid Connection Agreement*¹ documents will provide essential background regarding the grid connection requirements and processes. The Applicant must abide by the following terms and conditions:

1. The Eswatini Grid Code, and Grid Connection Application contain applicable technical, design, and operational standards and processed that must be complied with by the applicant. A copy of the Eswatini Grid Code can be found on the ESERA's website, www.esera.org.sz.
2. The IPP shall be obtain the applicable licenses from the Eswatini Energy Regulatory Authority (ESERA) in accordance with the Electricity Act, 2007 and other relevant regulations, bylaws and guidelines of the Kingdom of Eswatini. The EEC shall conduct grid integration studies to, among other things, confirm available grid capacity, assess the impact on the grid when the proposed power generation plant or unit is connected, determine grid strengthening requirements, etc.

¹ Grid Connection Agreements feature additional costs that differ from GCCs, specifying the terms and conditions under which the generation plant will be grid integrated. This cost varies per case. To comprehend the conditions and possible costs of generating plant point of connection, it is imperative the IPP to consult with the EEC early in the planning phase.

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 3 of 15	<u>Authorised by:</u> GM Research and Development

3. The EEC may request further information from the Applicant to process the application. While the EEC is processing the application, **the Applicant may be expected to provide and adhere to the following information:**

- Wherever there is a need, the EEC may schedule meetings with the Applicant and/or the Applicant's contractor to clarify details of the proposed generation plant.
- The Date of Receipt of the Application is the date on which the EEC received the completed Grid Connection Application Form and supporting documentation required to process the application.
- For the Application by the Applicant, who is not the owner of the property where the generation plant is located, the Applicant is required to obtain the necessary written consent and proof of such consent from the owner of the property to install and operate the generation plant and procure that the consent is maintained for so long as the generation plant is participating in the Grid Connection.
- The EEC's approval of the Application is subject to its assessment and sole satisfaction of the information submitted by the Applicant. By accepting the application, the EEC makes no guarantee that it will approve the Application, and its decision shall be final. Where an application is declined, clear reasons for such shall be provided. The EEC will endeavour to return comments within twenty-one (21) working days from receipt of complete information submitted by the Applicant for the connection of the generation plant to the grid.
- The EEC will thereafter communicate its final decision on the Application 10 days after Applicant has satisfactorily rectified the aspects raised in the comments period if any.
- In the Application, the Applicant shall designate and authorise a person who will be the Applicant's Representative who will be a person-in-charge in all matters relating to the Application.
- The EEC shall treat communications from or requests by any of the Applicant's Representative who will be a person-in-charge as duly authorized by the Applicant and shall be at liberty to ignore any communication from or request by any other person (regardless of whether such person has any interest in the relevant project).

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 4 of 15	<u>Authorised by:</u> GM Research and Development

- The EEC will not become involved in, or be liable for, any dispute between project owners or other parties interested in or claiming an interest in the project.
 - To ensure that the EEC only communicates with a person the Applicant has duly authorised, the Applicant must within 3 days of any change affecting their official representative, notify the EEC in writing about any changes and provide relevant information acceptable to the EEC on the appointment of a new representative to be the person-in-charge.
 - A completed Grid Connection Application Form and all the required documentation shall be submitted to EEC by email to eecipp@eec.co.sz.
4. If the application is satisfactory, the EEC will issue a Consent letter providing an in-principle acceptance of the application, and containing all details required for final approval.
 5. The Application process may be terminated if the Applicant fails to submit all relevant information to the EEC required for issuing the Consent Letter within three (3) months of the date of receipt of the application.
 6. Following the power plant's connection to the grid, the EEC shall issue a Completion Letter verifying the final details, which will include but not limited to the following:
 - the grid connection point of the generation plant.
 - the as-built type and the generation capacity of the generation plant; and
 - the Grid Connection Agreement Start Date
 7. If a Completion Letter is not issued within eighteen (18) months after the date of the Consent Letter, the application process may be terminated.

Grid Connection Charge (GCC)²

The Applicant will be invoiced for the labour costs and projected man-hours required by EEC personnel to execute a grid connection application for a generation plant. The grid connection

² It's worth noting that grid connection charges may evolve over time as grid infrastructure expands, technology advances, and regulatory frameworks change.

GRID CONNECTION APPLICATION

<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 5 of 15	<u>Authorised by:</u> GM Research and Development

charge will be in accordance to the applicable Maximum Export Capacity (MEC) specified below.

Generation Capacity Category	Grid Connection Charge (SZL/E) (15% VAT)
≥100kW to 1 MW	20,680.00 +VAT = 23,782.00
≥1 MW to <5 MW	27,995.00 +VAT = 32,194.25
≥5 MW to <50 MW	63,800.00 + VAT = 73,370.00
≥50 MW	114,928.00 + VAT = 132,167.20

Based on the larger of the MEC or the Notified Maximum Demand (NMD), only one GCC will be paid for both the generation plant and the supply. Please note that should the application for the generation plant and the supply not be submitted concurrently, the customer's subsequent applications will be subject to a new GCC, where applicable.

Applicability of Grid Connection Charge (GCC)

- New applications
- Changes in supply capacity – existing customers
- Recoverable works
- When more than one engineering study is requested at one connection point
- Change in scope requested by the customer

The following factors may have an impact on GCC changes:

- When more than one connection option is presented or requested in one GCC, only one fee is payable.
- If the customer requests another connection option from the original one, an additional GCC is due.
- When a customer requests a modification in the scope of a project, a new Grid Connection Application must be submitted.
- The new Grid Connection Application, which is to be provided, will be subject to a Grid Connection Charge adjustment.

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 6 of 15	<u>Authorised by:</u> GM Research and Development

Applicant Details Purpose

The EEC will only use the Applicant's personal information and other details provided in the application form to process the Applicant's application and the EEC shall treat such information in accordance with the prescripts of the Data Protection Act, 2022.

If any queries emerge because of the application form or submission of some of the documents that come with this application for identity verification purposes, don't hesitate to get in touch with **EEC System Planning Manager or Engineers** at +268 2409 4014/5/76, to make the required arrangements.

A non-refundable grid connection application costs applies to the different generation plant categories as stipulated above on the **Grid Connection Charge**.

This application form may be completed as a hard copy or soft copy, together with all supporting documentation. An electronic (soft copy) submission is preferred and can be submitted to the email addresses eeccipp@eec.co.sz. The customer will be contacted to confirm receipt of his/her application and be provided with a reference number.

1. APPLICANT DETAILS

(In the event of a joint venture, the application must be completed by a person authorized by all parties concerned.)

Title:	
Name and Surname	
Company name	
ID number	
V.A.T. reg no. or CRN no	
Physical address:	
Postal address:	

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 7 of 15	<u>Authorised by:</u> GM Research and Development

Contact Person’s Telephone Number

Contact Person’s Mobile Number

Contact Person’s Email

<u>Alternative Contact Mobile Number</u>	<u>Name and surname:</u> _____
	<u>Mobile number:</u> _____
	<u>Email:</u> _____

Date of Submission

Preferred name of the generator plant to be used with EEC systems (e.g., Maguga Hydro / USL Biomass)
This name will be considered by EEC for the database in order to readily identify the generation station.

2. GENERATION PLANT SYSTEMS DETAILS

Generation plant topology	<input type="checkbox"/> Synchronous Generation Unit <input type="checkbox"/> Power Park Module ³
Generation plant technology type	<input type="checkbox"/> Solar PV <input type="checkbox"/> Hydro <input type="checkbox"/> Biomass <input type="checkbox"/> Wind Power <input type="checkbox"/> Biogas <input type="checkbox"/> Battery storage <input type="checkbox"/> Coal

³ A Unit or ensemble of Units generating electricity, which is either non-synchronously connected to the network or connected through power electronics (inverter-connected) and is connected to a single Point of Connection. This includes, e.g., inverter-connected renewable generation such as solar and wind generators, or Energy Storage facilities

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 8 of 15	<u>Authorised by:</u> GM Research and Development

	<input type="checkbox"/> Other _____ (specify)
--	--

Generation capacity	_____ kW / MW
---------------------	---------------

Generation capacity existing at the point of connection	_____ kW / MW
---	---------------

Installation Location	Generator site:																																																																																			
	<table border="1"> <tr> <td>Latitude</td> <td>S</td> <td></td> <td></td> <td>°</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Longitude</td> <td>E</td> <td></td> <td></td> <td>°</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Substation name: _____</p> <table border="1"> <tr> <td>Latitude</td> <td>S</td> <td></td> <td></td> <td>°</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Longitude</td> <td>E</td> <td></td> <td></td> <td>°</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>NB: Indicate location using GPS coordinates format: dd°mm'ss.s (degrees, minutes and seconds)</p>	Latitude	S			°																	Longitude	E			°																	Latitude	S			°																	Longitude	E			°															
Latitude	S			°																																																																																
Longitude	E			°																																																																																
Latitude	S			°																																																																																
Longitude	E			°																																																																																

Connection Point Details:	New point <input type="checkbox"/>	Existing point <input type="checkbox"/>
---------------------------	------------------------------------	---

Will this application cause a change in supply (Notified Maximum Demand (NMD) /Maximum Export Capacity (MEC)) to the existing EEC point?	Yes <input type="checkbox"/>	No <input type="checkbox"/>			
	<table border="1"> <tr> <td>Indicate NMD</td> <td>_____ kVA</td> </tr> <tr> <td>Indicate MEC</td> <td>_____ kW</td> </tr> </table>		Indicate NMD	_____ kVA	Indicate MEC
Indicate NMD	_____ kVA				
Indicate MEC	_____ kW				

Do the proposed plant's feasibility or grid integration studies exist?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
--	------------------------------	-----------------------------

Did EEC conduct a study for the applicant regarding the generation plant?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If yes, specify the date of issue and the section conducted the study:	

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 9 of 15	<u>Authorised by:</u> GM Research and Development

Type of Application	<input type="checkbox"/> Application for Grid Connection of a new-generation plant <input type="checkbox"/> Transfer of Grid Connection Agreement ⁴ Completion Letter Date: _____ Ref. No: _____ <input type="checkbox"/> Application for alteration of grid-connected generation plant Completion Letter Date: _____ Ref. No: _____
---------------------	---

3. PROJECT SITE VERIFICATION

Is an agreement in place between the applicant and all registered landowners whom the planned development and related activities will impact?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, identify the landowners and projects that were approved: _____ _____ _____ _____
---	---

Is the site plan provided as an attachment, with the appropriate scale indicated?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, Is it a <input type="checkbox"/> soft copy or <input type="checkbox"/> hard copy
---	---

Is the proposed development going to have an impact on any existing	Yes <input type="checkbox"/>
---	------------------------------

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 10 of 15	<u>Authorised by:</u> GM Research and Development

infrastructure, such as telecommunications, utilities, rail, roads, and water?	No <input type="checkbox"/> If yes, please, specify: _____ _____ _____
--	--

Do you require an auxiliary supply? <i>NB: This is applicable to a new site.</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, a separate electrical supply application will be needed, and it must include the following information.: Site name _____ _____ kVA, _____ V, _____ 3/1 phase
---	---

4. TECHNICAL INFORMATION

Generation capacity and PoC	_____ kW Substation name _____ Voltage rating (at PoC): _____ kV Transformer size: _____ kVA
Is reliability supply connection required?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, stipulate the configuration required below. Radial/single supply <input type="checkbox"/> Ring fed supply <input type="checkbox"/>
New generation plant contribution to the grid	New NMD _____ MVA New Fault Current Contribution _____ MVA _____ kA
Existing supply point status:	Existing NMD _____ MVA Existing Fault Current Contribution _____ MVA _____ kA

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 11 of 15	<u>Authorised by:</u> GM Research and Development

Are there existing generation plants? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, provide the following information:		
	Technology Type	Installed Capacity (MW)
	PV Plant	MEC (Maximum Export Capacity) - MW
	Biomass	
	Wind	
	Hydro	
	Biogas	
	Coal	
	Other (Specify) _____	

Are project timelines provided related to the connection period?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>

Provide expected shutdown timelines, which can be due to maintenance	Technology Type	Yearly shutdown period anticipated (months /weeks)	Expected time of availability per year (months)

Is energy storage (ES) or a hybrid system connected?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>
If yes, state how it is applied.	

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 12 of 15	<u>Authorised by:</u> GM Research and Development

	<input type="checkbox"/> Standalone ES <input type="checkbox"/> Hybrid ES Specify the type of hybrid technologies: _____ _____ Technology ES type: Batteries type _____ Storage capacity size _____ MWh
Energy source and capacity required to charge and discharge the ES.	Solar PV _____ MW Import from Grid _____ MW Other (specify) _____ MW
Size (Power/Energy) and technology of Energy Storage (e.g. 5MW/20MWh L-Ion/Flow Battery)	Total Import Charging: _____ MW Export Discharging: _____ MW Storage MWh: _____ MWh Storage Medium: _____ MW
Combined Facility Maximum Export Capacity (MEC) (To be used for network thermal capacity checks in order to determine the MEC, which may not equal the total of the hybrid)	_____ MW

5. ECOLOGICAL DATA

(The applicant must complete this as required by EEC in order to process the application.)

Environmental Requirements:

Statutory Approvals are required for the construction of the generation plant and associated activities. Infrastructure traversing land needs to be protected by a servitude/s registered against the Title Deed and Swazi National Land (SNL) of the affected property. To expedite the customer's connection, the customer is advised to, as far as possible integrate the environmental impact assessment (EIA) for the generation plant with the EIA for the EEC connection assets. Separate EIAs for the generation plant and EEC assets need to be obtained to assist with transfer of servitudes, etc. to EEC. The customer will be required to discuss the requirements and coordination of the EIA for the EEC connection assets with the EEC, such as route selection, design, evaluation, and ranking of

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 13 of 15	<u>Authorised by:</u> GM Research and Development

alternatives, environmental management plan (EMP) for the construction phase(s), and servitude conditions. EEC will not automatically support any customer's license to own an application.

Did you consult with Eswatini Environmental Authority (EEA) about the project's requirements?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Is a waste license required and if so, what is the status of the application?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, state the status of application below _____ _____
Is an emissions license required and if so, what is the status of the application?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, state the status of application below _____ _____
Is water use permit required and if so, what is the status of the application?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, state the status of application below _____ _____
Are there appeals and/or legal reviews against any environmental authorisation? If so, what is the status?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, state the status of application below _____ _____ _____

GRID CONNECTION APPLICATION



<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 14 of 15	<u>Authorised by:</u> GM Research and Development

Does the EEA application cover all related activities up to the connection of a power line to the EEC grid?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, list all activities you applied for from the list. _____ _____ _____ _____ _____
---	--

If an EIA was required, please include the name of the environmental consultant as well as a list of other environmental assessments or approvals (e.g., waste, water, and air quality).	_____ _____ _____ _____ _____
--	---

Provide proof of landowner consent, to avoid requests for duplicate quotations on same land or very close proximity.	_____ _____ _____
--	-------------------------

Highlight significant potential risks of the project, e.g., wetlands, proximity to airports, mining activities, prospecting licenses, etc	Potential risk of the Project list. _____ _____ _____ _____ _____
---	--

GRID CONNECTION APPLICATION

<u>System:</u> Quality Management System	<u>Reference No. Revision No:</u> Q-RD-SP-P-04-F-01, Rev, 02	<u>Originated by:</u> System Planning Manager
<u>Revision Date:</u> 13.05.2022	<u>Page No:</u> Page 15 of 15	<u>Authorised by:</u> GM Research and Development

This is a required registration confirmation for the generation plant, and please tick the check box below to confirm that you have read and understood the requirements. Your application WILL NOT BE PROCESSED if you have not ticked the check box below to confirm your compliance with the registration for the generation plant under this application.

I/We acknowledge that before informing EEC to make arrangements for the connection of the generation plant to the EEC electricity grid, I/we should have applied to ESERA for the applicable licenses, , in accordance with the Eswatini laws and Connection and Network Code under Eswatini Grid Code. I/We also understand and confirm that EEC will not arrange the connection of the generation plant to the Grid if I/We fail to meet the above requirements.

Name of Signatory: *(as shown on the ID documents provided)	Signature and Company official stamp
Job Title:	
Date:	