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Renewable energy source production device registration

A C Whitcher Sawmill

Version 1.1



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Definitions and Acronyms

AIB	Association of Issuing Bodies
CD	Combustion Declaration
CRD	Central Registry Database
EECS	European Energy Certification System
MWh	MegaWatt hour – a measure of electrical energy equivalent to one hour of output at an output power of one MegaWatt.
RECs	Renewable Energy Certificate
RED	Renewable Energy Declaration
RES – E	Renewable Energy Source – Electricity
NCV	Net Calorific Value – the energy content per unit mass of a fuel discounted from the Gross Calorific Value (GCV) for moisture content of that fuel.
PD	Production Declaration

1. Executive Summary

The Renewable Energy Declaration (RED) for A C Whitcher Sawmill has been prepared by Watersmeets Estate (Pty) Ltd, the device owner. The device inspection was carried out by Nano Energy appointed as the Production Registrar for the registration of the device by the Issuing Body. This report documents the A C Whitcher Sawmill Renewable Energy Certificate (REC) device inspection audit, RED submission and device registration. It outlines the associated procedure followed in registration of the device in the Central Registration Database. Issuing of Renewable Energy Certificates (RECs) from the device is undertaken by zaRECs (Pty) Ltd. on behalf of the South African Renewable Energy Certificate market participants Association ([RECSA](#)). The registration of the device specifies the format of the Production and Combustion Declaration data sets for the purpose of issuance of RECs. The operator of the registry verifies that the data has been submitted according to the requirements of the applicable subsidiary document.

Nano Energy (Pty) Ltd was appointed to conduct the registration of the Production Device at A C Whitcher Sawmill and to undertake the following tasks:

- A C Whitcher Sawmill production device inspection on 6th August 2024.
- Registration of the device on the Central Registration Database. A letter confirming performance compliance of the device according to criteria in the [South African Domain Protocol](#) has been prepared and is attached. This production device registration audit report and the updated Forestry biomass-based subsidiary document to the South African domain protocol are attachments to the compliance confirmation document.

This report represents the output for these two tasks.

The set of definitions and criteria as set out in the European Energy Certification System's (EECS's) Rules (formerly the PRO – Principles and Rules of Operation) and the Forestry biomass-based cogeneration facility subsidiary document of the South African domain protocol have been followed in carrying out the registration of the A C Whitcher Sawmill in the Western Cape province of South Africa. Following the above procedures, the registration of the device as a Renewable Energy Source – Electricity (RES-E) production device has been renewed in the Central Registration Database (CRD). The Forestry biomass specific subsidiary document to the South African domain protocol has been prepared based on similar device registration in these fuel and technology categories and to account for updates in the Rules and requirements of RECSA. The domain protocol sets the rules that are supplementary to the EECS Rules. The relevant subsidiary documents in turn augment the Domain protocol by specifying details which are additional to the Domain Protocol.

Nano Energy hereby accepts the RED deposited by A C Whitcher Sawmill on the 4th October 2024 subject to the requirements outlined herein. The verification of the monthly data is undertaken at the time of submissions. The auditing of production and combustion declaration is not undertaken at the time of registration. The format of the submissions is set at the time of this audit.

The device registration was captured in the CRD on 8th October 2024 without deviations from the protocol or subsidiary document. A duplicate of the device registration confirmation is included as Appendix 2 to this report. The device can be viewed at:

[A C Whitcher Sawmill](#)

Combustion and production declarations received will be used for certificate issue against renewable energy sourced electricity production from the above date of registration. Certificates are to be issued by default to the:

Watersmeets Estate (Pty) Ltd CRD account: 30XWATESTF

2. Biomass-based cogeneration subsidiary document

The process required to be followed prior to the issuing of certificates as detailed in section C3 of the EECS Rules (being the EECS Rules Release 7.10) requires:

- Identification of the domain within which the market participants are commercially active.
- Each RES-E generator must gain registration for the production device (see chapter 2)
- Submission of a Renewable Energy Declaration (RED) by the generator or aggregator acting on its behalf to the issuing body seeking registration as a RES-E. The RED for registration of the A C Whitcher Sawmill has been prepared by Watersmeets Estate (Pty) Ltd RECSA with whom the RED is lodged and from whom registration is sought, provides services of the issuing body for the purpose of the South African voluntary RECs market. Nano Energy is the production registrar for the A C Whitcher Sawmill production device. The declaration is included as Appendix 1 to this report.
- Assignment of a unique identifier to the production device.
- The requirement to ensure that suitable reporting processes and data collection are in place at the device to ensure suitable transfer of this to the Issuing Body and common market data hub to enable the issuing of certificates has been met.
- Acceptance of the RED by the Issuing Body.

2.1. Domain definition

For the purpose of these activities the domain has been defined as the South African grid and off-grid electrical distribution and transmission networks.

2.2. Production device identifier

The EECS suggests an 18 digit device reference be recorded in the Central Registry Database (CRD). An algorithm has been chosen to assign unique South African device references. The device registration shall be composed of:

- The Central Monitoring Office (CMO) Company (RECSA NPO 096-079) prefix is used as the CMO ID ('00000027')
- The coding identifying the production device ('00000052'), where '108' is a numeric digit assigned by the CMO,
- a check integer as a check for reference authenticity ('3').

The device reference for the A C Whitcher Sawmill facility is therefore:

'0000002700000001083 '

2.3. Reporting process and data collection

The registration of the device specifies the format of the Production and Combustion Declaration data sets for the purpose of issuance of RECs. The operator of the registry verifies that the data has been submitted according to the requirements of the applicable subsidiary document at the time of submission.

The declaration of production from a device for the purpose of issuing certificates must make a statement of the proportion of electricity which has been generated from renewable resources. It is furthermore required that this proportion be calculated by reference to the energy content of the renewable and non-renewable fuels.

The maximum quantity of renewable energy is then calculated as follows:

$$RES - E = \left[\frac{Mass^{RE} \times CalorificValue^{RE}}{(Mass^{RE} \times CalorificValue^{RE}) + (Mass^{Non-RE} \times CalorificValue^{Non-RE})} \right] \times Output$$

A data submission template was established.

The following documentation will therefore be used for the process of issuing certificates to the Watersmeets Estate (Pty) Ltd account in the CRD:

- Cumulative Monthly mass of Forestry by-products combusted. Examples of instantaneous readings from these meters were gathered during the site visit and a worked monthly example (production declaration) prepared by the device. For A C Whitcher Sawmill this is not applicable at the time of primary device registration as only Saw products, by-products and waste are burned for Fuel so 100% of the power is considered renewable.
- Cumulative Monthly mass of any other Fuel Code combusted if any. For A C Whitcher Sawmill this was not applicable at the time of primary device registration.
- Total monthly electricity produced at the facility – Monthly in kWh.
- Monthly electricity produced as read at the internal meters represents the Production Declaration for the device and is forwarded by the metering service provider to the central monitoring office and specifically the operator of the CRD at crd@zarecs.co.za for capture in the raw data hub.

3. A C Whitcher Sawmill production device registration inspection

An inspection of the A C Whitcher Sawmill production device was carried out by David Du Preez. They were ably assisted in this activity by Messrs. Dalubuhle Dube (Power Station Engineer) and Godfrey Madewu (Electrician) of Watersmeets Estate (Pty) Ltd. The issuing body appoints a production registrar for the purpose of initial and periodic device inspections. For the purpose of this registration RECSA appointed Nano Energy as the production registrar for the A C Whitcher Sawmill. The inspection was conducted on the 6th of August 2024 between 13:45 and 15:30.

The site inspection included interaction with the relevant staff¹ to familiarise them with the requirements, obtain the relevant information for completion of the RED and ensure readiness to submit Production and Combustion Declarations.

The physical location of the internal electrical meter for measurement of total electrical power production was confirmed.

The monthly Production (PD) and Combustion (CD) declarations are to be lodged with zaRECs (Pty) Ltd. by the 7th of the following month.

3.1. Production declaration

Monthly electricity produced is calculated as follows:

- TA 1 + TA 2 + TA 3; less
- Transformer 2 – meter; plus
- Workshop and Saw Shop meter; less
- Eskom Incoming Meter

The internal electrical meters:

Generator or Meter	Serial Number
Turbine Alternator 1	99674909
Turbine Alternator 2	99674908
Turbine Alternator 3	99674910
Transformer 2 – meter	
Workshop and Saw Shop meter	
Eskom Meter	99674907

The monthly production from these generators and meters represents the Production Declaration for the device and is forwarded by the metering service provider to the operator of the CRD for capture in the raw data hub.

3.2. Combustion declaration

- The combustion declaration is to be submitted quarterly in the following format giving monthly figures for the preceding quarter and upon demand for issuance and/or redemption of RECs from the facility. For A C Whitcher Sawmill this is not applicable at the time of primary device registration as only Saw products, by-products and waste are burned for Fuel, so 100% of the power is considered renewable.

¹ Responsible staff who attended the briefing and walk-through on the day of the audit, being familiarised with the procedures for preparation of production and combustion declarations

Parameter	Unit
Mass (Volume) of Forestry by-products combusted	(tons) or (m3)
Net Calorific Value (NCV) (MJ/Kg)	(MJ/Kg) or (MJ/m3)

This yields a ratio of renewable energy to non-renewable energy for total electrical energy generated.

3.3. Certificates issued

Combustion and production declarations received allow for certificate issue against renewable energy production for capture in the CRD. Certificates are traded separately from physical power.

3.3.1. CRD data formats

The above data is captured in the CRD. The formatting of the production device code, production device-based coupon and coupon number, meter information matrix and code description tables are declared for the purpose of verification of their inclusion in the CRD.

The location of internal electrical meters for measurement of electricity production (MWh) was confirmed.

4. Lodging of RED and CRD capture

The RED as in Appendix 1 was received, accepted and approved by Nano Energy.

The device details have been captured in the Central Registration Database. The protocols outlined in EECS Rules and South African Forestry biomass-based domain protocol subsidiary document have been adhered to in the database and associated system.

The above constitutes registration of the device for the purpose of voluntary South African REC market for a period of 24 months from the date of registration. The process is in line with the EECS Rules and [South African Domain Protocol](#).

5. PD, CD and Issuing of certificates

The monthly Production (PD) and Combustion (CD) declarations are to be lodged with zaRECs (Pty) Ltd. by the 7th of the following month or upon request for issuance to crd@zarecs.co.za

5.1. Production declaration

The total monthly electricity production (MWh) represents the Production Declaration for the device and is forwarded by the metering service provider to the independent operator of the CRD for capture in the raw data hub.

6. Conclusion

Nano Energy hereby accepts the RED deposited by A C Whitcher Sawmill on the 4th October 2024 subject to the requirements outlined herein. [A C Whitcher Sawmill](#) was registered in the CRD on 8th October 2024 without deviations from protocol. A duplicate of the certificate confirming registration of the device is included as Appendix 2 to this report. Combustion and production declarations received will be used for certificate issue against renewable energy sourced electricity production from 8 October 2024. Certificates are to be issued by default to the:

Watersmeets Estate (Pty) Ltd CRD account: 30XWATESTF

7. References

- AIB 2018 EECS Rules (being the EECS Rules Release 7.10)
- AIB, 2015. EECS Rules PRO (Release 7.7) 15 March 2015
- AIB 2015. EECS Rules Fact Sheet 5 - Types of Energy Inputs and Technologies - Release 7.3 v2
- AIB, 2009. RECS AIB-PRO-SD03: EECS Registration Databases, 29 July 2009.
- Morgan, K 2005. Voluntary Green Power trading market in South Africa: Pilot Project Scope version 11.
- Nano Energy, 2010. Renewable Energy Domain Protocol for South Africa: Pulp and paper facilities Subsidiary Document, Release 2 Nano Energy (Pty) Ltd. March 2007.
- SATIB, 2009. RECS Domain Protocol for Republic of South Africa, Ver. 0,1, Nov 2009.
- Schäffler J. L. and Short R., 2005. Renewable Energy Domain Protocol for South Africa: Pulp and paper-based cogeneration facilities.

8. History of Versions

- 1.0 Draft working document (4 October 2024)
- 1.1 Images updated, PD and CD format confirmed (7 October 24)

Appendix 1.

Renewable Energy Declaration by A C Whitcher Sawmill

Renewable Energy Declaration by AC Whitcher Saw Mill

Watersmeet Estates Pty Ltd (Reg.no.1959/002363/07) wishes to receive Renewable Energy Certificates for the Technology-based electrical output from AC Whitcher Saw Mill. Registration is therefore sought for AC Whitcher Saw Mill in the South African Domain. This Renewable Energy Declaration (or RED) is prepared with the intention of declaring that the installation fulfils the criteria set out in the South African Domain Protocol and relevant Subsidiary Documents.

Period of validity: 24 months from date of registration on the Central Registration Database (CRD). After this time a RED will be re-submitted. Failure to do so will result in cessation of certificate issue for this Production Device. The criteria and the procedure for the RED may change over time.

- A.) Name: AC Whitcher Saw Mill
 Production device code: 0000002700000001083
 Address: R102 Coldstream, Tsitsikamma, Eastern Cape, South Africa
 Responsible person: Gene Ritchie (Director)
 Telephone: +27 (0) 422811713
 Email: gener@acwhitcher.co.za
- Production Registrar: Nano Energy (Pty) Ltd.
 Responsible person: Mr. Jason Schäffer
 Telephone: +27 (0)72 444 3445
 Email: jason@nano.co.za
registrar@nano.co.za
- B.) CRD Account Number: 30XWATESTF
 C.) Location of device (co-ordinates): -33.96492421290325, 23.713700109586938
- D.) Location and detail of export and import meters:
 Generator internal metering panel.
- TA1 – ser # 99674909
 - TA2 – ser # 99674908
 - TA3 – ser # 99674910
 - Transformer 2 meter
 - Workshop and Saw Shop meter
 - Eskom Incoming (Eskom Report)
- E.) Possible Sources of Fuel: Energy Codes: F01010303
 F.) Type of generation technology: Technology Code: T050300
- G.) Installed Capacity: 3.82MW (4.775 MVA)
 H.) Date of commissioning: 1980
 I.) Public support schemes: None or define support scheme
- J.) It is hereby guaranteed that:
 Watersmeet Estates Pty Ltd will not during the period of its Registration and for the same unit of electrical energy receive tradable certificates which represent the benefit of renewable electricity generation from both RECs and another similar system and can be exchanged for financial support
- K.) A diagram showing the Production Device, the location of export meters used for metering its generation and of transformer substations at the plant site. If there are generating auxiliaries for the Production Device and/or import meters for metering their demand these shall be also shown on the diagram.



 Authorised person
 Designation
 Watersmeet Estates Pty Ltd– AC Whitcher Saw Mill

 04/10/2024
 Date.

Appendix 2.

Device Registration Confirmation

8 October 2024

This serves to confirm that:

AC Whitcher Sawmill

Has satisfied¹ the criteria in the Forestry biomass-based generation facility
Subsidiary Document of the RECs Domain Protocol for registration as a:

Renewable Energy Source Electricity Production Device²



Device Number: [00000270000001083](#)

¹ The registration is valid for a period of 24 months from the time of device registration.

² The production device registration audit report and relevant technology-based subsidiary document of the Domain Protocol are attachments to this registration.

Appendix 3.

Electrical meters A C Whitcher Sawmill

Figure 1 Example of metering device for TA 1 and Eskom incomer.

