



## Final Audit Report

Audited Body	
Puro.earth Project Proponent	Accend AS
Name of Contact for Puro.earth Project Proponent	Paul Fergusson
Production Facility Operator	Wakefield Biochar
Name of Contact for Production Facility Operator	Thomas Marrero
Production Facility Location	Perry, FL – United States

Audit Description	
Type of Audit	Production Output Audit
Number of CORCs under Audit	1,815
Tonnes of dry biochar under Audit	1,219
Reporting Period Covered by Audit	1 July 2022 to 31 May 2023
Objective of Audit Engagement	Provide assurance opinion against requirements of Puro.earth Rules v3.1 (Edition 2023)
Date of Auditor Engagement	3 November 2023
Date of Audit Report Submission	19 December 2023

Reporting Requirements	
Number of eligible CORCs	1,783
Tonnes of eligible dry biochar	1,219
CORC conversion factor	1.463 tCO <sub>2</sub> e per tonne dry biochar
Calculation Method	Biochar Methodology

Auditing Body	
Auditor	EnergyLink Services Pty Ltd
Lead Auditor	Rodrigo Pardo
Additional Audit Personnel	Thais Monteiro Voll Brandon Melyadi
Peer Reviewer	Mark Wallace

This document details the nature and scope of the services provided by a member of EnergyLink Services in respect of the eligibility of the CO<sub>2</sub> Removal Supplier Production Facility under the requirements of Annex A: Biochar Methodology to the Puro Standard General Rules v3.1 (Edition 2023).

This document is issued to Puro.earth detailing audit procedures conducted and the auditor's opinion in relation to the eligibility of the Production Facility. It should not be used for any other purpose.

Because of the inherent limitations in any internal control structure, it is possible that fraud, error, or non-compliance with laws and rules may occur and not be detected. Further, the audit was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the audit has not been performed continuously throughout the period and the procedures performed on the relevant internal controls were on a test basis. Any projection of the evaluation of control procedures to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The audit opinion expressed in this report has been formed on the above basis.

Copies of relevant documentation are available on the Puro.earth website: [puro.earth](https://puro.earth)

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20231219 Audit Final Report _ Foley vF.0	19 December 2023	vF.0	Rodrigo PARDO	Mark WALLACE

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Abbreviation	Description
'H'	Hydrogen
'O'	Oxygen
CO <sub>2</sub>	Carbon Dioxide
CORC	CO <sub>2</sub> Removal Certificate
C <sub>org</sub>	Organic Carbon
GHG	Greenhouse Gas
LCA	Life Cycle Assessment
OC	Overcalculation
UC	Undercalculation
The Puro Rules	the Puro Standard General Rules v3.1 (Edition 2023)
The Biochar Methodology	Edition 2022 v2 Annex A: of the Puro Rules

## PART A: Auditor's Report

To: Puro.earth

Dear Sir / Madam,

EnergyLink Services Pty Ltd (EnergyLink Services) were engaged to perform a reasonable assurance audit of Production Facility 001-Foley's CO<sub>2</sub> Removal calculation from the production of biochar for the period 1 July 2022 to 31 May 2023 against the eligibility requirements of 'the Puro Standard General Rules v3.1 Edition 2023' (hereafter referred to as "the Puro Rules").

### Details of Audited Bodies

Puro.earth Project Proponent	Accend AS
Production Facility Operator	Wakefield Biochar Facility 001 – Foley GSRN: 643002406801000725
Production Facility location	GP Foley Cellulose, 1 Buckeye Drive Perry, FL – the United States

### Responsibility of the Audited Bodies' Management

The management of the audited bodies (that are, Accend AS and Wakefield Biochar) are responsible for the application of the requirements of 'Annex A: Biochar Methodology of the Puro Rules Edition 2022 v2' (hereafter referred to as "the Biochar Methodology") in quantifying CO<sub>2</sub> Removal Certificates (CORCs) from the production of biochar, which is reflected in the proof provided to EnergyLink Services.

The management of the audited bodies are responsible for preparation and presentation of the evidence in accordance with Section 5 the Biochar Methodology. This responsibility includes the design, implementation, and maintenance of internal controls relevant to the preparation and presentation of proofs that are free from material misstatement, whether due to fraud or error.

### Our independence and quality control

EnergyLink Services have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence, due care, confidentiality, and professional behaviour. These include all the requirements defined in the *Fortum – Supplier Code of Conduct*<sup>1</sup>.

Furthermore, EnergyLink Services maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements, in accordance with *ISQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information*.

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<sup>1</sup> Fortum (2020), Fortum – Supplier Code of Conduct, available at: [www.fortum.com/about-us/contact-us/suppliers/code-of-conduct](https://www.fortum.com/about-us/contact-us/suppliers/code-of-conduct)

## Our responsibility

EnergyLink Services' responsibility is to express an opinion on the audited bodies' quantification of CORCs and compliance with the *Puro Rules* based on the procedures we have performed and the evidence we have obtained.

We have conducted a reasonable assurance engagement in accordance with the *Puro Rules* and relevant international standards, as listed below:

- International Standards on Assurance Engagements ISAE 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information.
- ISQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagement.

A reasonable assurance engagement in accordance with relevant international standards involves performing procedures to obtain evidence about the Production Facility process controls and quantification of CORCs in accordance with the *Puro Rules*. The nature, timing and extent of procedures selected depend on the assurance practitioner's judgement, including the assessment of the risks of material misstatement, whether due to fraud or error. In making those risk assessments, we considered internal controls relevant to the audited bodies' preparation of proofs. We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

## Summary of procedures undertaken

The procedures we conducted in our reasonable assurance engagement included:

- reviewing evidence provided by the audited bodies;
- assessing the audited bodies against eligibility criteria;
- conducting interviews to validate the evidence provided;
- analysing procedures that the audited bodies used to gather data;
- testing of calculations that the audited bodies performed; and
- identifying and testing assumptions supporting the calculations.

## Use of our reasonable assurance engagement report

This audit report has been prepared for use by the audited bodies and Puro.earth for the sole purpose of reporting on the audited bodies' quantification of CORCs and compliance with the *Puro Rules*. Accordingly, EnergyLink Services expressly disclaim and do not accept any responsibility or liability to any party other than Puro.earth and the audited bodies for any consequences of reliance on this report for any purpose.

## Inherent limitations

There are inherent limitations in performing assurance audits - for example, assurance engagements are based on selective testing of the information being examined - and because of this, it is possible that fraud, error, or non-compliance may occur and not be detected. An assurance engagement is not designed to detect all misstatements, as an assurance engagement is not performed continuously throughout the period that is the subject of the engagement, and the procedures performed are based on a test basis. The conclusion expressed in this report has been formed on the above basis.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating, and sampling or estimating such data.

## Corrective Action Requests / Recommendations

One corrective action request was addressed during the audit process, and the auditor issued one carry forward recommendation.

### Corrective Action Request 1: LCA

The auditor requested Wakefield Biochar (Foley) to review its total feedstock inputs (e.g., bark, natural gas, and fuel oil) calculations for the reported period. In response to the request, Wakefield Biochar identified that the total feedstock inputs calculations were not considering all figures, resulting in an error in wet tonnage of feedstock calculations. The formula error was corrected, and the total feedstock inputs calculations were amended.

### Carry Forward Recommendation 1: LCA

EnergyLink Services recommends that Wakefield Biochar augment its LCA calculation procedures, so that all data, assumptions, and formulae used for the calculation of emissions associated with the biochar life cycle are consistent with the supporting evidence.

## Overall Conclusion

### Positive Conclusion (Production Output Audit)

#### Production Output Audit

The lead auditor is able to express a reasonable assurance opinion that, in all material respects, the quantification of 1,783 CO<sub>2</sub> Removal Certificates (CORCs) for the reporting period 1 July 2022 to 31 May 2023 by the audited body was correct. The audit procedures indicated that an overcalculation of 32 CORCs was made by the audited bodies. The error is not considered material as it is below the 5% materiality threshold.

CORCs Under Audit	Abs. Error (CORCs)	Net Error (CORCs)	Eligible CORCs	Abs. Error Rate (%)	Net Error Rate (%)
1,815	32	32 OC	1,783	1.763 %	1.763 %

\*OC = Overcalculation / UC = Undercalculation

Sincerely,



Rodrigo PARDO PATRON | Director of Engineering – EnergyLink Services Pty Ltd  
Lead Auditor  
19 December 2023



## Part B: Detailed Findings

### Audit Findings and Conclusions

Table 1 to Table 4 summarises the findings from the Production Output Audit. As part of the audit procedures, the auditor performed interviews with site representatives to the Production Facility. Where possible, the findings from these procedures were used to validate that the eligibility criteria under the methodology had been met, that the proofs and evidence provided by the audited bodies were accurate, and that the metering used to quantify the Output was appropriate and correctly calibrated (for details refer to Appendix C).

### Eligibility Assessment

Table 1: Eligibility Assessment

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the biochar is used in applications other than energy.	Y	The auditor confirmed that the produced biochar was used for direct farm application and for retail and bulk sales, as a pure form or in a compost blend. The auditor confirmed that the biochar was used as a soil amendment.	N/A.
Confirm that the biochar is produced from sustainable forest or waste biomass raw materials.	Y	The auditor confirmed that the biochar produced in the Georgia Pacific Foley Cellulose power boilers and was produced from sustainably sourced biomass. The feedstock was composed of bark from the internal debarking system and sourced externally.	N/A.
Confirm that the producer demonstrates net-negativity with results from a LCA that shows: <ul style="list-style-type: none"> <li>– carbon footprint of the biomass production and supply.</li> <li>– emissions from the biochar production process.</li> <li>– carbon footprint of the biochar end use.</li> <li>– cradle to grave.</li> </ul>	Finding	The auditor identified an error in the calculation of its total feedstock inputs (e.g., bark, natural gas, and fuel oil). The error was due to the total feedstock inputs calculations not considering all figures, resulting in an error in wet tonnage of feedstock calculations. <b>This error resulted in the over-calculation of 32 CORCs.</b>	Corrective Action Request 1
	Finding	Except where noted above, the auditor confirmed that the LCA provided by Wakefield Biochar (Foley) included all information on the emissions of the different stages of the biochar life cycle (cradle-to-grave).	Carry Forward Recommendation 1

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
<p>Confirm that the biochar production process meets requirements 1.1.4 to 1.1.6 of the Biochar Methodology, namely that:</p> <ul style="list-style-type: none"> <li>– no fossil fuel is used for heating the pyrolysis reactor</li> <li>– the pyrolysis gases are recovered or combusted</li> <li>– the molar H/C<sub>org</sub> ratio is less than 0.7</li> </ul>	Y	<p>The auditor verified that while the primary source of thermal energy for the Production Facility power plant is derived from the biomass (bark) being processed, the system also relies on natural gas and fuel oil to operate and maintain the boiler. Approximately 20% of the energy input comes from natural gas, crucial for maintaining the correct steam pressure in the turbine.</p> <p>In an email exchange with Puro.earth dated 19 September 2021, the auditor confirmed that fossil fuel may be used in the biochar production process, when biochar is co-generated in a boiler, it functions as a multi-functional unit, whereby the biomass is gasified and turned into co-products (i.e. steam and biochar). As such, the auditor confirmed the biochar production process met the eligibility requirements of the Puro.earth Standard and Marketplace General Rules v3.1 (Edition 2023).</p> <p>The auditor confirmed that the associated emissions from the multi-functional system were accounted for in the LCA and properly allocated to the co-products.</p>	N/A.
		The pyrolysis gases and heat are used for steam production, which is converted to electricity.	
		The molar H/C <sub>org</sub> ratio was 0.33.	
Confirm that measures are taken for safe handling and transport of biochar to prevent fire and dust hazards.	Y	An average of 52% moisture was added to the char to ensure the safe handling and transport of the product within the site.	N/A.

## Confirmation of Production Facility Eligibility

Table 2: Production Facility assessment

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm the Production Facility Eligibility under the general rules of Puro Standard.	Y	The auditor confirmed that the audited bodies have already gone through a Production Facility Audit in 2023 and achieved a positive outcome.	N/A.
Confirm that the quantity of biochar produced and sold is documented via appropriate processes.	Y	The auditor confirmed that Wakefield Biochar had robust procedures to appropriately quantify the quantities of biochar produced and sold. Exiting the facility, the trucks with the biochar were weighted by a calibrated weighbridge, and the moisture of the biochar was measured and recorded. The auditor confirmed that Wakefield Biochar kept detailed records documenting the biochar quantities, moisture content, dates, times, and shipment destination.	N/A.

## Quantification of CO<sub>2</sub> Removal

Table 3: Quantification of CO<sub>2</sub> Removal - Calculation Methodology

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the quantification of CO <sub>2</sub> removal is calculated using the Calculation formula of CO <sub>2</sub> removal.	Y	Except for the error found by the auditor in Appendix C, the auditor examined the CORC calculator provided by the audited body and confirmed that the formula applied in the quantification of CO <sub>2</sub> removal was as per the Puro Rules.	N/A.
Confirm that the inputs to the Calculation formula of CO <sub>2</sub> removal are appropriate and consistent with the evidence provided.	Y	Except where noted in Appendix C, the auditor reviewed the evidence provided by the audited bodies and confirmed that the inputs to the calculation formula of CO <sub>2</sub> removal had been correctly determined.	N/A.

## Verification of Proofs

Table 4: Verification of proofs and documentation

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the standing data for the Production Facility meets the requirements of the Biochar Methodology and is consistent with other evidence.	Y	The auditor confirmed that all relevant standing data collected was complete and consistent.	N/A.
Confirm that the necessary proof and evidence documents are maintained by the Production Facility as per Section 5 of the Biochar Methodology <sup>2</sup> .	Y	The auditor confirmed all necessary evidence has been provided as per Section 5 of the Biochar Guidelines.	N/A.

<sup>2</sup> Information in Section 5 of the Biochar Methodology includes:

- Proof of sustainability of raw material for forest and/or waste biomass.
- LCA data for biomass and biochar production.
- Justification on the soil temperature used for the calculation of the biochar sequestration.
- Proof of product quality, production volume, sales and end use of biochar.
- Proof of no double counting/C positive marketing.

## Peer Reviewer Conclusion

Name of the peer reviewer	Mark Wallace
Peer reviewer's credentials	<ul style="list-style-type: none"> <li>o Bachelor of Systems Engineering (Honours), majoring in Mechanical and Materials – Australian National University.</li> <li>o Certified Performance Measurement and Verification Analyst (PMVA), Efficiency Valuation Organisation (EVO).</li> <li>o Climate Active Registered Consultant.</li> <li>o Certificate IV in Project Management.</li> </ul>
Peer reviewer contact details	Email: <a href="mailto:mark@energylinkservices.com.au">mark@energylinkservices.com.au</a> Phone: +61 475 894 971
Outcome of the evaluation undertaken by the peer reviewer	Minor amendments to the report.

## Appendix A: Response to Previous Audit Recommendations

The Production Facility's audit dated 23 January 2023 (EnergyLink Services Pty Ltd) contained two recommendations. The recommendations and the auditor's responses are provided in Table 5.

Table 5: Previous Audit Recommendation

Requirement	Requirement Met?	Verification Remarks
<b>Recommendation (1):</b> EnergyLink Services recommends that Wakefield Biochar augment its LCA calculation procedures, so that all data, assumptions, and formulae used for the calculation of emissions associated with the biochar life cycle are consistent with the supporting evidence.	Partially	The auditor reviewed the emissions calculations procedures, and confirmed all emissions sources and the LCA calculations were updated to reflect changes of equipment, processes, and procedures. Nevertheless, the auditor found one error in the LCA, listed in Appendix C.  As such, the auditor issued Carry Forward Recommendation 1 to ensure Wakefield continue augmenting its emissions calculations procedures and checks.
<b>Recommendation (2):</b> EnergyLink Services recommends that Wakefield Biochar augment its quality assurance procedures so that all inputs to the calculation are reflective of the evidence provided and presented using the appropriate units.	Y	The auditor observed that Wakefield Biochar has improved its record-keeping practices, incorporated daily moisture measurements, weighed shipments from the site and records check of the biochar sold. Moreover, discussions with Wakefield Biochar personnel revealed ongoing efforts, including the testing of an advanced blockchain system for managing shipment data. The system is anticipated to be implemented in 2024, promising further enhancements to record-keeping capabilities. Consequently, the auditor is satisfied this recommendation has been addressed.

## Appendix B: Site Visit Findings

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During the kick-off meeting, Wakefield personnel communicated that Wakefield Biochar (Foley) Production had been discontinued because Georgia Pacific Mill opted to permanently shut down the mill in early September 2023. As a result, no site visit was scheduled. The auditor had, nevertheless performed the Facility Audit, where a virtual site visit was performed.

## Appendix C: Summary of Calculation Errors

A summary of the calculation errors and the associated impacts on CORC calculation is provided in Table 6.

Table 6: Summary of Calculation Errors Biochar Screenings Stream

Source of Error	CORC calculation	Corrected CORC calculation	Abs. Error (CORCs)	Net Error (CORCs)	Abs. Error Rate (%)	Net Error Rate (%)
Errors in the calculation of feedstock inputs (e.g. bark, natural gas, and fuel oil) for the reported period.	1,815	1,783	32	32 OC	1.763 %	1.763 %
<b>Total</b>	<b>1,815</b>	<b>1,783</b>	<b>32</b>	<b>32 OC</b>	<b>1.763 %</b>	<b>1.763 %</b>

\*OC = Overcalculation/UC = Undercalculation