

Biochar - Northmore Gordon

Canonical: <https://northmoregordon.com/glossary/biochar/>

Details:

[Home](#) › [Glossary](#) › [Biochar](#)

Biochar

Biochar is a stable, carbon-rich form of charcoal produced by pyrolysis of biomass. It is a solid product created when organic material is heated in an oxygen-limited environment, converting the feedstock into a resistant carbon form. Biochar differs from other charcoal products in its engineered production for soil application and carbon sequestration. We recognize biochar as relevant to carbon management and environmental-attribute assessment, particularly where organizations evaluate carbon storage and removal claims in their emissions inventories or environmental certificate applications.

Related guidance

[Carbon advisory](#)

[Scope 1, 2 and 3 emissions](#)

[Certificates](#)

[Government schemes](#)

[Certificate trading](#)

[Measurement and verification](#)

What is biochar?

Biochar is a stable, carbon-rich form of charcoal produced by pyrolysis of biomass. It is a solid product created when organic material is heated in an oxygen-limited environment, converting the feedstock into a resistant carbon form. Biochar differs from other charcoal products in its engineered production for soil application and carbon sequestration. We recognize biochar as relevant to carbon management and environmental-attribute assessment, particularly where organizations evaluate carbon storage and removal claims in their emissions inventories or environmental certificate applications.

What are the soil benefits of applying biochar?

When applied to soil, biochar increases soil fertility, crop productivity, water retention, and soil carbon content. These agronomic benefits arise from biochar's high porosity, which improves water-holding capacity and nutrient availability, and its ability to support microbial activity in soil. The combination of improved soil health and increased carbon storage makes biochar application relevant to organizations pursuing both operational efficiency and emissions-reduction objectives. Our carbon advisory services can help assess biochar's role within a broader carbon strategy and verify claims about carbon sequestration when relevant to reporting or environmental-attribute applications.

How long can biochar sequester carbon dioxide?

Biochar can safely sequester CO₂ for thousands of years. This long-term stability is a key characteristic that distinguishes biochar from other carbon-reduction interventions and makes it relevant to carbon-removal and storage claims. For organizations considering biochar within their carbon strategy or environmental-attribute projects, the multi-millennial timescale has implications for how the

sequestration is accounted for and reported. Our guidance on carbon-accounting boundaries and environmental claims addresses the requirement to specify the physical storage process and accounting basis when making carbon-removal or storage statements in sustainability reporting or certificate applications.

How is biochar produced?

Biochar is produced through pyrolysis of biomass. Pyrolysis is a thermal decomposition process in which organic material is heated in an oxygen-limited or oxygen-free environment, converting the feedstock into biochar (solid), bio-oil (liquid), and syngas (gas). The specific pyrolysis conditions—temperature, residence time, and heating rate—influence the final biochar properties and its suitability for different applications. Organizations considering biochar projects should document the production process and feedstock characteristics, as these factors affect both the soil benefits realized and the eligibility of the project under carbon-credit or environmental-certificate schemes.

What is the difference between carbon removal and emission avoidance in biochar projects?

Carbon removal is the physical outcome of capturing and storing carbon dioxide, which biochar sequestration represents. Emission avoidance is preventing an emission that would otherwise occur. A biochar project may involve both: avoidance occurs when biomass that would have decomposed is instead converted to biochar; removal occurs when the resulting biochar is applied to soil and stores carbon for millennia. Our carbon-accounting guidance emphasizes using correct terminology when making environmental claims. Organizations must specify which physical outcome their biochar project achieves and ensure that reporting boundaries and evidence support the stated claim without conflating the two mechanisms.

How does biochar relate to carbon-credit eligibility under the ACCU Scheme?

Biochar projects may potentially generate Australian Carbon Credit Units (ACCU) if they meet an applicable approved method under the ACCU Scheme. The scheme requires projects to be registered before activities commence, with exceptions in specific methods. A biochar project's eligibility depends on whether an approved method exists, whether the project meets newness and regulatory-additionality requirements, and whether monitoring and reporting obligations can be met. We advise organizations to separate the technical opportunity from the scheme-assessment stage early. Before relying on ACCU revenue, organizations should establish the proposed method, project proponent, real commitment history, and required rights, then confirm eligibility with the relevant authority.

What evidence should be prepared if biochar is part of an organizational carbon strategy?

If biochar is integrated into a carbon-reduction or carbon-removal strategy, organizations should document the feedstock source, pyrolysis process, application rate and location, soil baseline and post-application conditions, and the timeframe over which sequestration is claimed. Our carbon-accounting guidance recommends writing down the entities or activities included, the reporting period, the applicable framework, data sources, and any exclusions. Organizations should maintain a claim file with exact wording, supporting calculation, source documents, period, assumptions and approver details. Where biochar is combined with other interventions (renewable energy, efficiency upgrades), keep the physical reductions from contractual attributes and carbon offsets distinct in reporting and avoid subtracting purchased offsets without applying the relevant reporting framework correctly.

Can biochar alone meet a company's net-zero or carbon-neutral commitment?

Biochar sequestration alone cannot establish a net-zero or carbon-neutral claim without a complete boundary definition and supporting framework. Net-zero and carbon-neutral claims require specifying a defined boundary, reporting period, all relevant emission sources, the methodology applied, and how

each category of emissions is addressed. Biochar contributes a carbon-removal mechanism but does not eliminate operational emissions or scope 3 supply-chain emissions. Our guidance on environmental claims emphasizes that a single instrument or offset should not be presented as eliminating every emissions category. Organizations pursuing net-zero targets should develop a comprehensive carbon strategy with multiple levers—energy efficiency, renewable energy procurement, process improvements and carbon removal—and clearly map each component to the applicable reporting framework.

How can Northmore Gordon assist with biochar project assessment?

Our carbon advisory services—including diagnostic workshops, opportunity assessment, transition planning, and environmental-attribute due diligence—can support biochar project evaluation as part of a broader carbon strategy. We can help organizations establish the starting position, identify gaps in carbon management practices, assess the feasibility and financial implications of biochar implementation, and determine eligibility under relevant schemes. Our knowledge of ACCU projects, environmental certificates, carbon accounting, and reporting frameworks allows it to connect biochar sequestration potential with engineering, procurement, and investment decisions. Organizations considering biochar should prepare their business objective, available evidence, applicable reporting framework, and deadline, then contact Northmore Gordon to establish an appropriate assessment scope.