

Insights on Carbon Financing and Commercialization of Carbon Projects



Presentation for:



Local impact at a global scale

thenext150.com



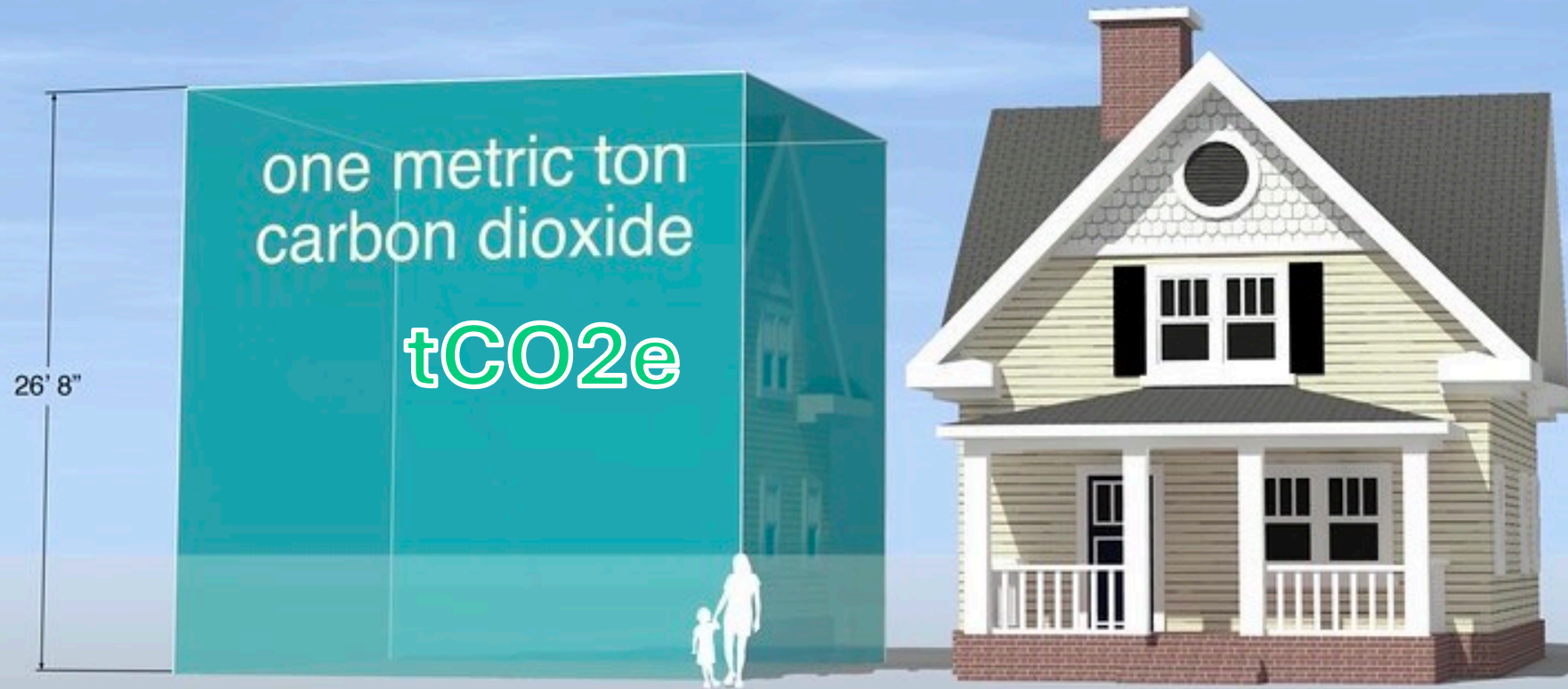
The Next 150 is an environmental venture development company, dedicated to scaling carbon removal projects in emerging markets



General Biochar Systems, our first venture, implements and operates proprietary biochar systems and processes

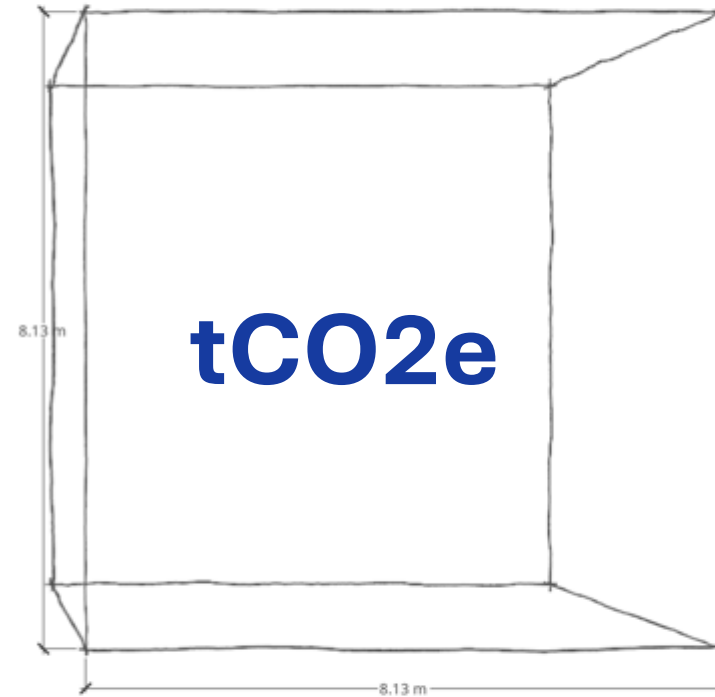
- Fully integrated biochar company
- Producing biochar from agricultural waste
- Generating high-quality carbon removal credits (CDR's)
- Researching and developing long-term applications for biochar

Carbon Credit = 1 ton of Carbon Dioxide equivalent (tCO₂e) reduced or removed



What is a Carbon Credit?

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Carbon Credit = 1 ton of Carbon Dioxide equivalent (tCO₂e) reduced or removed

\$275bn

Compliance Carbon Offsets

Compliance offsets are issued **by the governing body of a compliance industrial emitter program** (eg: EU ETS) and are bought by regulated emitters for their compliance. Unlike Voluntary offsets, **Compliance offsets cannot be generated by private companies.**

30 ETS implemented globally covering 38 national jurisdictions

\$2bn

Voluntary Carbon Offsets

Voluntary offsets are generated by private entities executing **carbon emissions reduction or removal projects** issued through private offset registries.

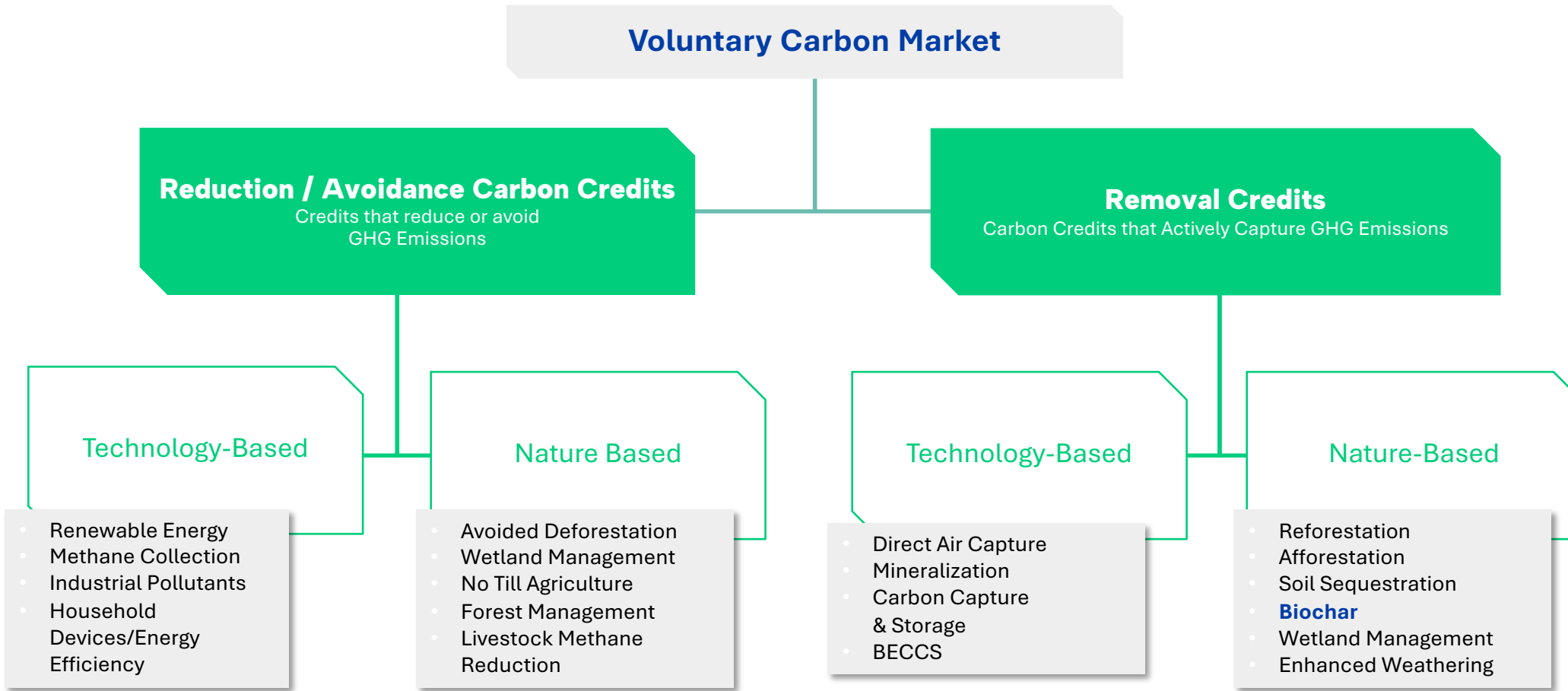
They are voluntarily used or purchased by a corporation against their own emissions to make their operations or products more sustainable or carbon neutral.

*While both markets are **not interchangeable**, some fungibility is starting to appear in certain national compliance markets, leading to opportunities*

Introduction to Carbon Markets



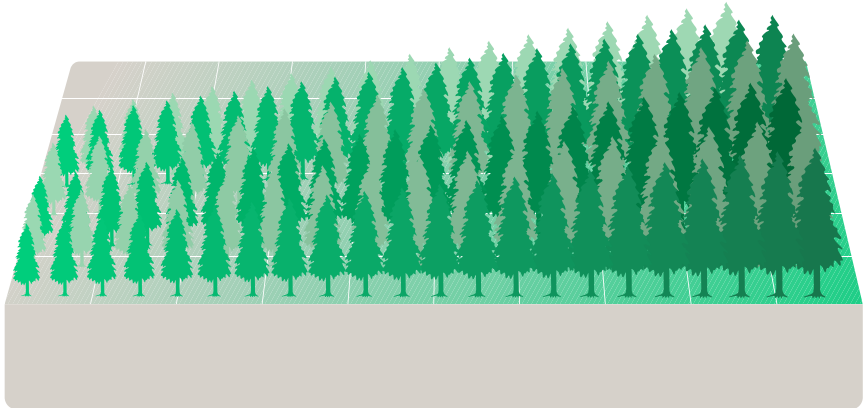
The Voluntary Carbon Market is comprised of several different categories of credits / projects:



Introduction to Carbon Markets

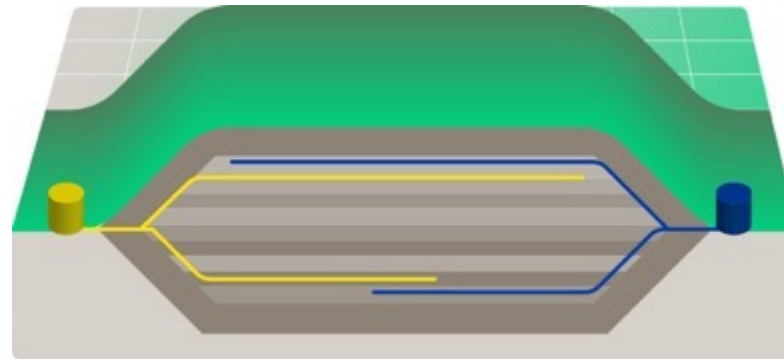


An offset credit, often referred to as a carbon credit, **is a tradeable unit representing one ton of carbon dioxide equivalent** reduced, avoided, or removed from the atmosphere



Removal Carbon Credits – Afforestation/Reforestation:

- The biomass of a tree is approx. 50% carbon
- 1 hectare of trees = 12-80 tCO₂e/year **removed**



Reduction / Avoidance Carbon Credits – Landfill gas capture:

- Landfills emit methane when organic materials decompose. Methane (CH₄) is 22 times more harmful to the atmosphere than CO₂.
- 1 ton of CH₄ reduced = 22 tCO₂e **reduced**

Structured Process & Governance



Key Investment Processes

Value Generation

Sourcing Phase

Targeted Origination & Screening

- Identify asset and investment opportunities with superior return prospects
- Gather initial information on sites, owners, industrial processes and projects
- Preliminary site visit for fact finding and planning purposes
- Preliminary underwriting analysis and contact with vendor, suppliers, stakeholders
- **TEA (technical-economic analysis)** which includes engineering and carbon accounting

Design Phase

Underwriting Feasibility

- Market research on comparable and competing products, key clients, vendors, customers
- Due diligence and coordination of advisors (legal, IP, property, tax, etc.)
- Preparation of financial analysis and evaluation of returns
- Project structuring and negotiation with the local counter-parties
- **PDD (Project Design Document)** development and draft to be listed on registries

Strategic Investment

- Devise detailed investment strategy such as JV's, co-investments or early off-takes
 - Such as: syndication, seed funding, operator JV, or external investor
- Coordination with advisors to finalize key contracts/PO's
- Final Investment Committee approval, formalization of docs, and execution of contracts

Execution Phase

Execution Growth & Scale

- *Implement, Validate, and Verify* (vary by structure) but is fundamental for go-to market
- Develop SOP's and establish operational team in order to prepare for growth and scale
- Formalize client, customer, and business development and sales initiatives, as well as ERP systems
- Hire technical team with objective to innovate on patentable systems or modularization
- Control activities to include **MRV (monitoring, Reporting, and Verification)**, benchmarking, QA, and risk management

Leadership Management & OPS

- Provide programmatic and portfolio management leadership, guidance, and governance
- Develop strategic plans for IP, tech, and regional and global strategic relationships (universities)
- Promote and showcase venture platform and projects at key conferences, events, channels

Exit Phase

Exit & Monetization

- Explore highest and best value exit route through network leveraging
- IPO, VC Series, Strategic Acquisition, Sum-of-Parts, Licensing, Franchise, SPAC*, Grow and Cash Flow...

PDD Draft ready: Ex-Ante Offtake Agreement

- Early offtake agreement on majority of credits = ideal
- Reduction of market price + illiquidity risk
- Investment into TEA + PDD draft relatively low (60-300 kUSD)
- Creates the possibility to mobilize project finance streams
- Deals usually closed at a discount to spot price

Project Verified and First Issuance of Credits: Ex-Post Spot Sales & Offtake Agreement

- Risk of illiquidity
- Market Price risk carried until issuance of the credits
- No discount to spot price needed



General Biochar Systems



the next 150

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Why Agricultural Waste?



6 Billion tons

of Agricultural Crop-Based Products p.a.

\$8 Trillion

Market Value



1.6 Billion tons

Waste Biomass Generated p.a.

31%

Contribution to Human-Caused Emissions

Biochar

Is an effective waste management solution for

**Revenue Generation,
Cost Reduction &
Carbon Removal**

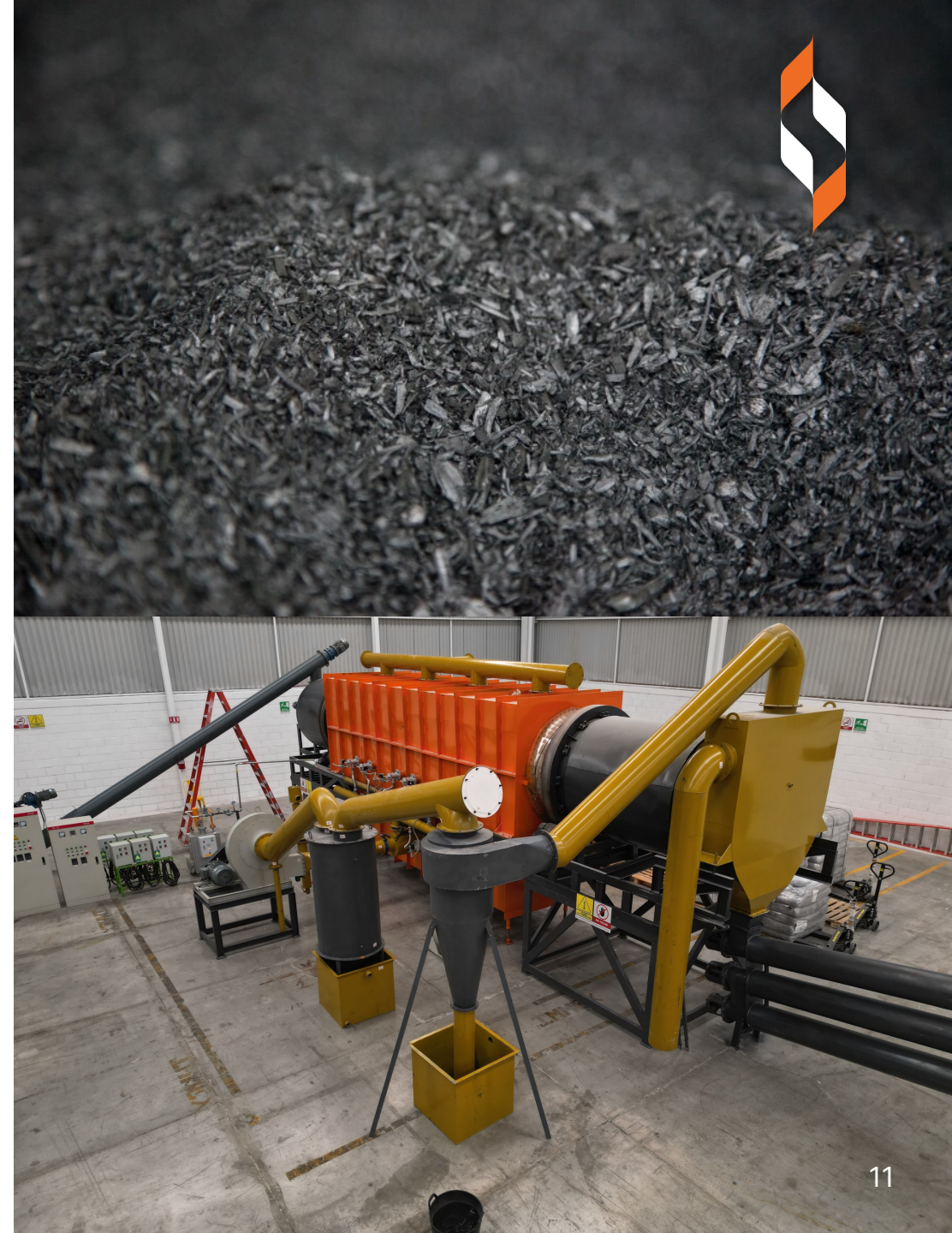
◆ What is Biochar?

Biochar is produced in an industrial process where biomass undergoes very high temperatures in a limited oxygen environment – **mineralizing its carbon content**

Chemically, biochar has stronger bonds than the original woody biomass and thus **does not decompose and return emissions to the atmosphere.**

Deployment of biochar can **generate high quality Carbon Removal Credits through use of the generated Biochar in long term storage solutions**

Biochar's material properties make it a suitable input across the **cement, steel, agriculture and environmental remediation sectors**



GBS Plant 01

Modular demonstration biochar facility in Guanajuato, Mexico:

- Project established in partnership with the **Irrigation District 011**, which has over 23,000 farmer members and over 100,000 ha under irrigation
- Processing **farmgate AgriWaste streams in Corn, Wheat and Sorghum** production



Project Details:

- **60,000 MT** of waste biomass processing capacity p.a.
- **17,000 MT** of Biochar produced
- **35,000 tCO₂e** Carbon Credits generated with biochar used as a soil amendment and not as fuel
- **25** Direct Employment
- **800** Indirect Employment due to farmer, logistics and community involvement



Corporate Demand Transitions from Carbon Avoidance to Carbon Removal



632 of the world's largest 2,000 public companies (by revenue) have announced plans to achieve Net Zero greenhouse gas (GHG) emissions.

Over 40% of these firms plan to use offsetting as a strategy to achieve their Net Zero commitments

According to the World Bank, this growth "in voluntary corporate commitments is the main driving force behind increased carbon credit demand"

52% of companies expect removal credits to dominate their portfolio by 2030



Biochar: Hybrid Carbon Removal Solution



Technological carbon capture credits (eg: DACCS) are priced > \$300 per tCO₂e
Biochar, a solution that straddles the Nature-Based and Tech/Industrial segments
generates credits in the range \$70 – 150 per tCO₂e



Biochar is **the most cost-effective, scalable solution** for high-quality carbon capture credits today

Carbon Markets Growth & Projected Fungibility



Voluntary Carbon
Markets

\$2Bn



20x

Expected Growth

\$40B

Expected Market Value



Compliance Carbon
Markets

\$850Bn

Several ETS' (incl. EU ETS) **have announced the incorporation of carbon removal credits in coming years**

Parallel Monetization Strategies – The End of Total Additionality?



Commercialization of Integrated Systems



Pyrolysis systems demand growth:

- Over 100 projects on Puro pipeline in different phases of development
- 4 main US/EU manufacturers currently facing >12 months lead time
- Pyrolysis process has numerous uses (eg: plastics recycling, waste management, renewable energy)

CDR Generation and Sales



Revenue Model Validated:

- 5-year offtake TS signed with an Oil Major
- Due diligence ongoing with major Tech corporations and Financial Services firms
- Important supply shortage expected by 2030: 8-208 MtCO₂e by 2030*

Biochar and Byproducts Sales



Market Making Approach:

- Due diligence ongoing for sale to major cement player
- Currently developing Agriculture use market

Applications across Agriculture, Construction, Energy



**TAM:
>\$80 bil.**



Agriculture

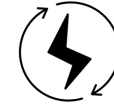
- Use case for improved soil structure, water and nutrient retention and microbial activity -> **improved yields**
- Global Market for Agricultural Inputs (incl. fertilizers and soil conditioners):
 - **\$250 bil. in 2021**
 - 12% CAGR
 - Biochar TAM (10%) = **\$25 bil.**

Direct Applications



Sustainable Construction Materials

- Biochar can be used as a component such as **carbon-negative cement, concrete and asphalt** in construction materials
- Global Market for Sustainable Construction Materials:
 - **\$300 bil. in 2021**
 - 9% CAGR
 - Biochar TAM (10%) = **\$30 bil.**



Renewable Fuel

- Biochar is a byproduct of pyrolysis, the same process used to produce torrefied biomass
- Torrefied biomass has **higher energy density, improved grindability, and hydrophobicity** vs normal biomass
- Global Market for Solid Biomass Fuels:
 - **\$130 bil. in 2021**
 - 8% CAGR
 - Biochar TAM (10%) = **\$13 bil.**

Niche Applications



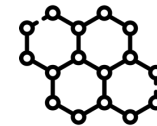
Wastewater Treatment

- Biochar can be used as an adsorbent material for the **removal of pollutants and heavy metals, reducing the overall cost of wastewater treatment**
- Global Market for Wastewater Treatments:
 - **\$65 bil. in 2021**
 - 9% CAGR
 - Biochar TAM (5%) = **\$2.75 bil.**



Animal Feed

- Biochar is used as an **animal feed supplement and bedding material**, which helps reduce odors and ammonia emissions
- Global Market for Animal Feed and Bedding Material:
 - **\$250 bil. in 2021**
 - 10% CAGR
 - Biochar TAM (5%) = **\$10 bil.**



Graphene Production

- Biochar can be used as a **precursor for producing graphene** through various methods, such as chemical vapor deposition (CVD) and liquid-phase exfoliation
- Global Market for Graphene:
 - **\$1 bil. in 2021**
 - 35% CAGR
 - Biochar TAM = **hard to estimate**

Research & Development, Creation of an Ecosystem



R&D Projects:



NXT150 Ecosystem Entities



As industry pioneers, we **invest in R&D for our systems and applications of biochar** and **incubate ecosystem companies**