

# **BIO CARBON INTERNATIONAL**

Sustainable Carbon for a Healthy Planet

www.biocarboninternational.com

**Bio Carbon Production Plant Investment Presentation** 

(Round 1)



# Who is Bio Carbon International?



Bio Carbon International is focused on bio carbon production and technology

Our goal is to be the primary producer of bio carbon for all industries and help mitigate climate change through commercial and charitable projects focused on sustainable agriculture and land restoration

Utilizing waste biomass from timber and agriculture, we are able to produce quality bio carbon products on an industrial scale. Our process is low energy, sequesters CO2 and prevents emissions of methane and other harmful greenhouse gases from decaying biomass

We have licensed patents and technological support for the industry's highest capacity and most efficient production process

We are seeking to build and operate plants in North America, Europe, Africa, South America, and Asia

We provide the opportunity to invest in a lucrative business that has unlimited growth potential, and will help save the environment from the devastating effects of global warming



### **Global Issues**



Global Coal Energy Demand

The world has lost a third of its arable land due to erosion or pollution in the past 50 years 1

24 billion tonnes of fertile soil and 12 million hectares of productive land are lost each year 2

We emit over 43 billion tonnes of CO2 each year 3

8 billions tonnes of coal are burned around the globe every year 4

37% of global electricity is generated by burning bituminous coal 5

Coal fired power plants are continuing to be built in Asia despite being phased out in other regions 6 Bio carbon can be used as a partial or full replacement for fossil coal with 20 x less ash, same BTU, and carbon neutral. with no additional infrastructure costs.



<sup>5</sup> https://www.worldcoal.org/coal-facts/coal-electricity/



<sup>6</sup> https://oilprice.com/Latest-Energy-News/World-News/China-Started-More-Coal-Plants-Than-The-Entire-World-Retired-In-2020.htr

<sup>1 &</sup>lt;a href="https://www.worldwildlife.org/threats/deforestation-and-forest-degradation">https://www.worldwildlife.org/threats/deforestation-and-forest-degradation</a>

<sup>2</sup> https://www.weforum.org/agenda/2015/06/how-can-we-fight-desertification

<sup>3</sup> https://www.theworldcounts.com/challenges/climate-change/global-warming/global-co2-emissions/story

### **Waste Biomass**



### Plant



### **Biocarbon**





## **Supplied from:**

- Existing waste wood piles
- Waste from forestry industry
- Driftwood
- Agricultural waste
- Food waste

# 1 plant can produce 360,000 tonnes of biocarbon per year:

- Sequestering 2.2-3.5 tons of co2 / per ton of bio carbon (dependent on end use and product)
- Rate of 45 tonnes/hr of each 3 torrefier plant

### **Products:**

- Thermal Bio Carbon
- Metallurgic Bio Carbon
- Biochar
- Terra Preta Mix
- Activated Charcoal





Improves reforestation efforts

Helps to solve the global climate crisis

> Reduces food supply footprint while improving food security & safety

Water retention & drought resistance of soil

Reduces bituminous coal use and decarbonises industry

Reduces Air pollution, CO2 & GHG emissions

Absorbs pollutants & reduces irrigation needs of agriculture

Reduces forest fires by removing waste biomass Aids governments in meeting Paris Climate Accord requirements





Used in steel and cement manufacture. Cost competitive replacement for Met coal



Used in water filtration, cosmetics, medicine, and many more industries

THERMAL BIO CARBON

For use in coal fired power plants as replacement for fossil coal. Same BTU value, lower emissions and ash content

METALLURGIC BIO CARBON



BIO CHAR , BIO CARBON AG TERRA PRETA,

Used alone, or in soil mixes. Multiple specialty biochar applications and specifications available.

ACTIVATED CHARCOAL







- ✓ Our thermal bio carbon has the same BTU value as fossil coal and significantly higher MJ/KG than the competing biomass energy alternatives currently used
- ✓ It can also be stored, transported and ground directly with fossil coal (All the convenience and efficiency of coal without the emissions)
- ✓ Biomass pellets and wood chips also require additional storage and transportation costs due to fire risk, often also requiring additional infrastructure or filter cleaning in the power plants





# REDUCING GHG EMISSIONS



Each bio coal plant producing up to 360K tonnes /year will reduce GHG emissions by 792K tonnes of CO<sub>2</sub> by displacing fossil coal

The GHG emissions are further reduced when production is for agricultural purposes and not utilised in power, steel, or cement plants

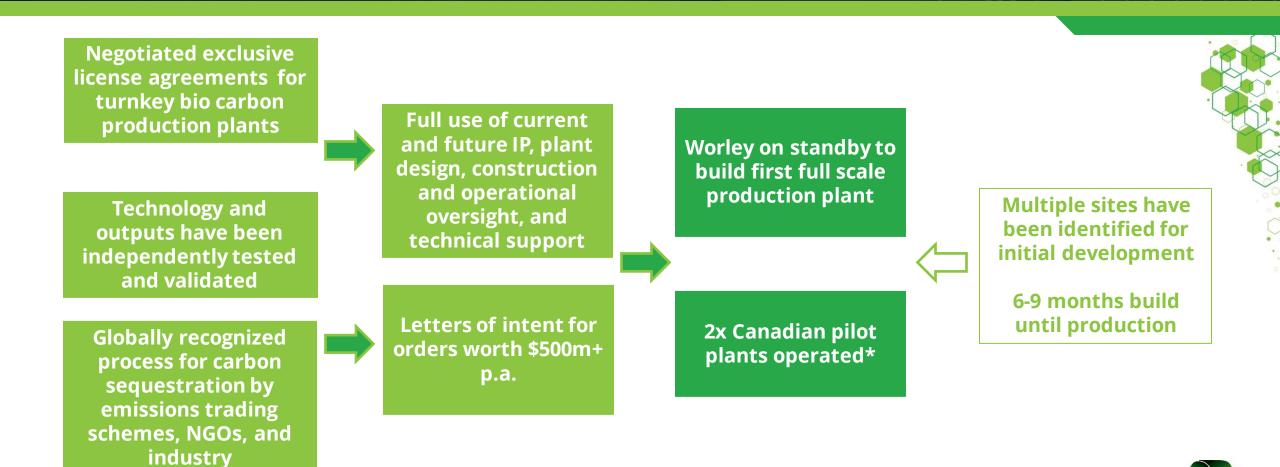
When utilised as a soil enhancement (biochar, or terra preta) the 360K tonnes of bio carbon reduces GHG emissions by 1.25 million tonnes of CO2

In addition to CO2 reductions, our process involves a gas loop that utilises the methane released during the drying process as fuel for drying. Thereby mitigating the methane released during decay.

Biochar is also now been used as a livestock feed that reduces their methane emissions

Our goal is to link production to a blockchain that will be able to track where product is allocated as well as the associated carbon credits or allowances tied to the product. Tokenisation and digital carbon trading markets to follow.

## **MILESTONES**



<sup>\*</sup>Full scale single torrefier demo plant was run at production rate of 12 tons per hr. Additional lab scale torrefier used for material testing, and optimization testing.

## **INVESTMENT OPPORTUNITY**

Investment
opportunity
\$70M for 1 plant with
production capacity
of 360k tons of bio
carbon worth \$90M+
p.a.



Environmental Benefits

**Financial** 

**Benefits** 



Reduced ash waste and methane emissions

Attractive margins (Gross Profit 58% / Net Profit 37%)

Further potential revenue from Carbon Credit market, product tokenization, and future high value carbon based products

Quantified & certified CO2 sequestration – Reduction of 792k tonnes of CO2 emissions p.a.



## **Growth potential:**

Increased urgency and global demand for carbon reduction and carbon offsets with governments and industry – setting net zero emissions targets





# BIO CARBON INTERNATIONAL INVESTMENT SUMMARY

- ✓ Turnkey bio carbon production plants. W LOI'S for product
- √ \$90million + USD annual revenue per plant w low opex
- ✓ Minimum investment \$70 million USD / plant as primary investor (Plant, site, fibre, opex)
- **✓** World's highest annual bio carbon production capacity of 360k tonnes per plant
- ✓ Biotech, cleantech, agtech, renewable energy, fintech in one project
- **✓ Carbon Offset investment and ESG investment friendly**
- ✓ Products for decarbonization of energy, construction, and agriculture
- √ 58% Gross profit, 37% Net profit
- Scalable to 100's of plants globally (5 plant plans available)





- ✓ Finance agreement
- ✓ Long term production contract
- ✓ Guaranteed percentage of sales over set period
- Dedicated plants to produce bio carbon for clients
- ✓ Carbon Offset investment and ESG investment
- ✓ ICO / IEO / Smart contracts for secured investment

