**CARBON COMPANY**

***Executive Summary***

The Central Valley of California - Recent History

In the recent past there were a number of power plants burning agricultural biomass such as nutshells, fruit pits, orchard removal, kill from drought and the Bark Beetle and other organic waste streams. As these power plants could no longer meet new air quality standards they were forced to shut down, leaving the waste streams to pile up and become a nuisance.

For over a decade now, the State has been searching for a solution to this issue. At this point it appears they have settled on either pyrolysis or gasification as one potential solution. Both technologies convert biomass and organic feedstock materials to useful byproducts such as low-carbon transportation fuels, green power and carbon char. Our Team is aware of a number of these processes that will be coming on line starting in late 2023 and beyond.

For every ton of biomass processed by pyrolysis or gasification, there will be close to 500 pounds of carbon char recovered. This recovered carbon possesses different size pore structures and quality based upon feedstock type. Much of this carbon will require post-processing and can be enhanced yielding high quality, high value products to fit into existing carbon markets that currently serve agricultural, industrial and environmental marketplaces.

A portion of this carbon will be used as an agricultural soil amendment to improve plant growth and sequester carbon. Other carbons will be utilized in the manufacturing of plastics, adhesives, paints, toners and carbon fiber, in addition to filtration media.

Diversified industries have never had this much domestically produced carbon available to them, since most is imported from offshore. The key to carbon sales is the capability to deliver consistent quality and quantity and the ability to customize each carbon for a specific industry.

We have put together a Team of capable, informed, experienced and motivated people willing to take on this extraordinary opportunity. To date, there have been no companies in the carbon sector with the vision or expertise to exploit these unaddressed value-added opportunities on a commercial scale.

Our business model is to locate our equipment and post-processing lines in close proximity to the carbon source and purchase the hot carbon from the producer. It will immediately be customized, cooled, packaged and sold into present markets while developing new markets and applications as production increases the business scales.

The majority of carbon produced from biomass fits into 3 categories: biochar carbon, activated carbon and industrial carbon. We intend to be heavily involved and major players with each of these spaces. The characteristics of the carbon; being hardness, density and pour structure vary significantly from one feedstock to another. Therefore, most raw carbon has very few uses. By rendering a fare base price for raw hot carbon at $0.05 per pound to the producer, they will share in additional incentives as new markets develop and carbon credits are realized.

**CARBON COMPANY IS A PIONEER IN BIOCHAR MARKETS DEVELOPMENT**

**Summary**

Our peer recognized Management Team has an accumulated 50+ with diverse disciplines associated with biochar production systems and market applications. Over the past 15 years we also have approximately $300,000 invested in R&D development in Bend Oregon. Through that process, we have identified and addressed the risk factors, which affect critical path and achievable milestones for this Project. These include: site selection, abundant and economical feedstock, the ability to achieve permits from the appropriate regulatory agencies, proven, scalable, and regulatory compliant manufacturing technologies; identified customer and market demand to purchase products and services; a technology team with the experience to install, start-up, and manage successful operations; and lastly, a financial / business model which is profitable, scalable and repeatable. Our vision is to identify additional organic waste streams that can be converted to valuable carbon products and install plants near available hot carbon feedstock sources as they come on line.

**Greg Brooks -** Manager of Agricultural Products / Sales

**Mike Ballantine -** Manager of Environmental Markets / Sales
**Sean Williams -** Manager of Construction, Operations and Customer Relations

**Rocky Warner -** Manager of R&D and Industrial Sales

**Biochar in Agriculture**

Biochar is a fine-grained, highly porous carbon material. As a soil amendment, Biochar increases soil fertility and improves plant health through nutrient and water retention. In addition to these soil additive properties, Biochar is derived from organic feedstock in a carbon-net-negative process and results in long-term carbon storage when applied to soil. Carbon, which otherwise would be released into the atmosphere as carbon dioxide, (CO2) and other greenhouse gases, is converted to a stable form of carbon, that being Biochar.

The uses of Biochar as a green, sustainable, and climate friendly product; coupled with its far reaching benefits as a soil amendment and growth enhancer for food crops and horticulture has been demonstrated in dozens of peer-reviewed papers in the scientific literature.

**The benefits of Biochar as a soil amendment include:**

* The conservation of water
* Lower requirements of synthetic fertilizers
* Control of runoff contamination from both surface and ground water
* Long-term sequestration of carbon
* Enhanced production of food crops

**Activated Carbon**

Activated carbon products were first developed by the United States military as filter media in gas masks to combat chemical warfare. Today, the market has grown globally and the use of activated carbon products is recognized as the best available technology by regulatory agencies worldwide for contaminant removal in liquid, gas and vapor streams. The market, product profiles and applications continue to increase as the global economy industrializes and the demand for the consumption for pure water increases.

**Applications**:

1. Contaminant adsorption from drinking water
2. Wastewater treatment
3. Vapor extraction
4. Ground water remediation
5. Color removal
6. Odor control
7. Air stream treatment

**End user industries:**

1. Defense contractors
2. Superfund contractors
3. Military bases
4. Refineries
5. Food and beverage
6. Pharmaceutical
7. Chemical
8. Utilities
9. Municipalities
10. Semi-conductor / Manufacturing

**Regulatory factors driving the US carbon market:**

1. The Clean Air Act / Montreal Protocol (Ozone depleting substances)
2. The Clean Water Act
3. The Safe Drinking Water Act
4. Resource Conservation Recovery Act
5. Toxic Substance Control Act
6. USEPA Landfill Policy
7. Regulations imposed on the mining and energy sectors.

Value-added Carbon Conversion System

Processing Example: A Glomaland System capable of receiving 600 lbs. per hour of hot carbon at a cost of $0.05 per pound. Sales of virgin activated carbon are projected at $0.65 - $1.80 per pound and expected to average $0.87 per pound. Plant is expected to operate 340 days per year, yielding close to $4.4 million per year in gross revenues. Feedstock and operational costs will trend at $0.45 per pound leaving net proceeds of $2 million annually.

 Lot, Building and Security

* Conditional Use Permit
* Ingress / Egress
* Shipping / Receiving Area
* Concrete Pad
* Steel Building
* Finished Goods / Storage
* Perimeter Fencing

Price: $580,000.00

Utilities

* Permits
* Electrical Service with Meter
* Natural Gas with Meter
* Water with Meter
* Sump / Sewer
* Compressed Air (Above ground)
* Lighting (Interior / Exterior)
* Control Room
* Shipping / Receiving Office
* Security System

Price: $260,000.00

Other Site Specific Permits:

* Authority to Construct (DEQ)
* Permit to Operate (DEQ)
* Source Testing

Price: $80,000.00

Preprocessing and quality control equipment

* Shaker screen
* Particulate control, dust collection and size separation
* Transport conveyors
* Bag loaders
* Scale
* Mill

Price: $280,000.00

Carbon Activation System and post processing equipment

* 600# per hour Carbon Activation System (Continuous)
* Feed hopper
* Transport conveyors
* Shaker screens
* Particulate control, dust collection and size separation
* Transport conveyors
* Bag loader
* Scale

Price: $1,600,000.00

Laboratory Equipment

Price: $100,000.00

Engineering, Management and Market Development

Price: $600,000.00

Total Cost to Startup: $3,500,000.00

**Greg Brooks - Manager of Agricultural Products / Sales**

* Lifelong career in agricultural and mechanical contracting disciplines.
* In the past 20 years Greg has been involved in the installation and operation of gasifiers, material handling equipment and in research of industrial and agricultural carbons.
* Greg developed a pelletized carbon based soil amendment and along with Bill Petrich worked with the Oregon Dept. of Agriculture to write the regulations. Upon meeting those requirements, they received Oregon’s first agricultural carbon amendment label [AG-R1032482FPR].
* Greg will be bringing his leadership and wisdom to advance the use of carbon as the foundation for sustainable organic soils. He believes it is time to create a dependable sustainable agricultural carbon market by ramping up carbon production and involving all parties.

**Mike Ballantine - Manager of Environmental Markets / Sales**

* Past President of International Tech Corp, a distributor of the Thermal Recovery Unit (TRU).
* Twenty five years’ experience in Thermal Conversion, Thermal Recycling, Air Pollution Control, Water Treatment, Activated Carbon Production and Carbon Sequestration.
* Extensive background in permitting, regulatory, utility and infrastructure
considerations, intellectual property protection, “go-to-market” metrics,
Channel Management, SBA 8a Programs, and Governmental Sales.
* Co-founder of Energy Associates International, LLC, which holds all
intellectual property for the Thermal Recovery Unit. (TRU)
* Awarded US Patent 6,758,150 July 6, 2004 “System and Method for Thermally
Reducing Solid and Liquid Waste and for Recovering Waste Heat.”

**Sean Williams - Manager of Construction, Operations and Customer Relations**

* Has worked his entire career in the construction and contracting business.
* Expertise is wide ranging and includes: installation of water, electricity, sewer and gas for residential, industrial and municipal customers.
* 20 years’ experience in constructing buildings, excavation, streets & sidewalk installation, understands the entire process, costs and the permitting requirements.
* Sean and his crew (John Yzaguirre, Louie Yzaguirre) installed, made upgrades and have operated the TRU system for more than two years and are the most knowledgeable contractors on the TRU.
* Sean and his crew can trouble shoot and resolve any issues that involve the TRU or related equipment; whether it concerns the PLC, electric motors, shafts, bearings, steam boiler or any of the ancillary equipment. They can integrate, install, operate and train others to do the same.
* Sean’s highly talented and experienced team is also capable of designing and building specialty equipment sometimes needed to integrate and install components manufactured by different companies.
* Sean and his team work closely with government agencies on permitting issues or meeting regulatory requirements such as air quality, OSHA and all safety standards. They quickly adapt and understand the critical path for positive results.

**Rocky Warner - Manager of R&D and Industrial Sales**

* Project/Process supervision: Spearhead research and development
* CarStrategic planning: Multiple disciplines: OSHA/DOT Certified
* Engineering, Equipment Design and Function, Equipment/Materials Procurement and assembly
* Develop, prepare, implement documents for both long and short term budgeting, financial data, project Cost and Risk Analysis to satisfy organizational goals and/or to attain project funding
* Structure and initiate supporting documents for permit attainments; buildings, site, roads, utilities, conditional use permits, air permitting and public meetings
* Administer permit compliance documents as required by EPA, IDEQ in collaboration with Federal, State, County and City permitting organizations
* Recognized for extremely effective discussions with potential clients: Organize trade shows and maintain social media accounts to bolster sales based on the understanding of markets
* Develop out of the box business solutions with collaborative efforts utilizing an existing team of multi-cultural industry professionals