

# Carbon Removal Purchase Application

## General Application

**(The General Application applies to everyone, all applicants should complete this)**

Company or organization name

Gravitas Infinitum - Carbotura Project

Company or organization location (we welcome applicants from anywhere in the world) Naples

Name of person filling out this application

Naples Florida USA

Email address of person filling out this application

alw@gravitasinfinitum.com

Brief company or organization description

*Waste plastics recombined into Carbon Capturing and Sequestering Biomaterials.*

### 1. Overall CDR solution (All criteria)

- a. Provide a technical explanation of the proposed project, including as much specificity regarding location(s), scale, timeline, and participants as possible. Feel free to include figures.

***Carbotura Climate ESG Triple-Play***

## Triple-Play for The Environment:

- Waste Plastics Elimination - 45,000-80,000 tons per year per module
- Large Scale Vertical Agriculture for Biomaterial Creation – 1,860,000 lbs. per day
- Carbon Capture & Sequestration – 100-350 tons per day

## Highlights:

Lowest Cost for Carbon Capture & Sequestration (CCS) it is a DACS system (Direct Air Capture and Sequestration)

- Multiple Revenue Streams
  - Waste Plastics Elimination (any type)
  - Natural Biomaterials Production (Bioplastics, paper, fuels, etc.)
  - CCS Credits (Multiple Climate & Energy Credits continuously produced)
- Streamlined Build Cycle
  - Off-The-Shelf Components
  - 14-18 Month Build Per Module

## Key Components:

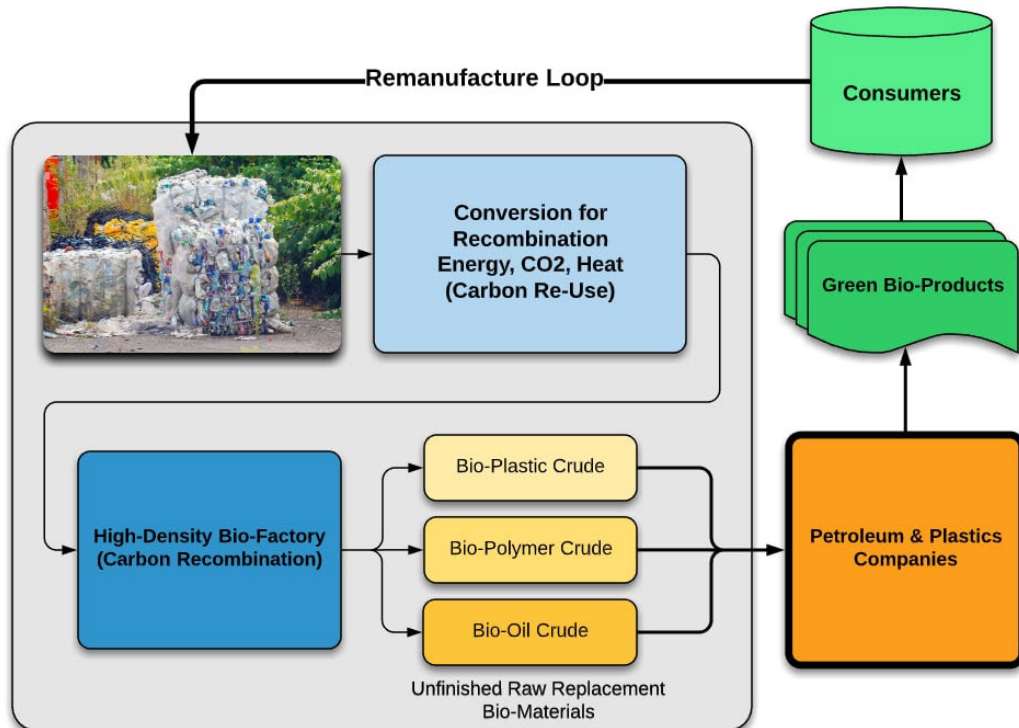
- Proven Technology with multiple applications
  - Currently focused on commercial viability and industrial commodity products
  - Easily adaptable for food production and biomaterials for medical purposes
- Works well for petroleum and plastics companies;
  - Upstream Biomaterials Replacement for crude oil drilling or
  - Downstream in remediating waste plastics and atmospheric carbon being exposed by the petroleum and plastics companies

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We are starting construction in 2021 on 250,000 sq. ft. modular waste plastics elimination to biomaterials creation with carbon capture and sequestration(CCS), with option water

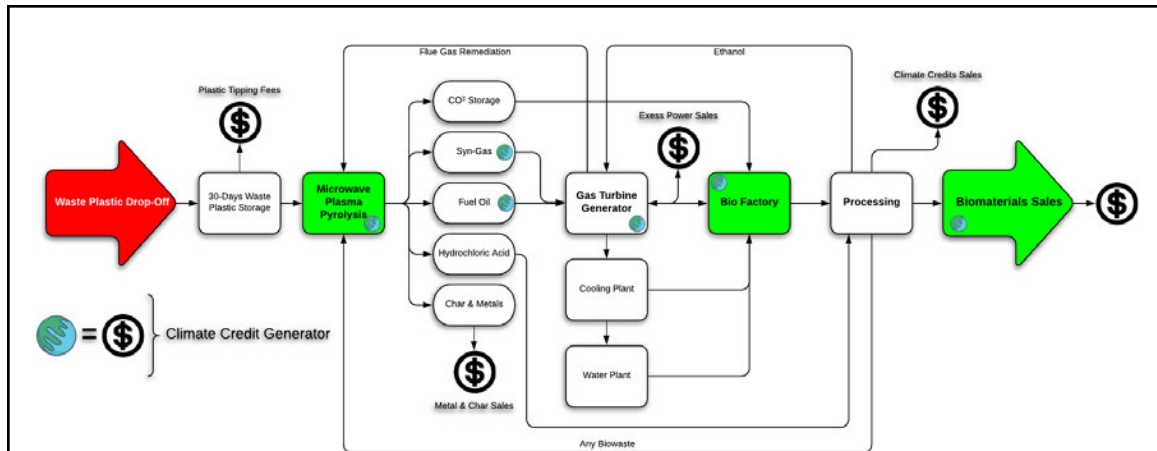
remediation. We eliminate all plastics types, recombining the molecules as feedstock to large scale high-density bio-factories (Vertical Farming) with the outputs being raw material commodities used in bioplastics, packaging, paper, food, etc. This supports closed loop circular economies and “guilt free” plastics, which are infinite duration carbon traps. Our modules can replace petroleum crude supplies with green natural bio crude materials. We also remove atmospheric CO2 from the output side of bad emitters.

Depending on throughput a single module removes 100-350 tons of CO2 per day, we generate our own power from the waste plastics (45,000-80,000 tons per annum) and it becomes a renewable energy, and avoids megatons of new energy emissions.



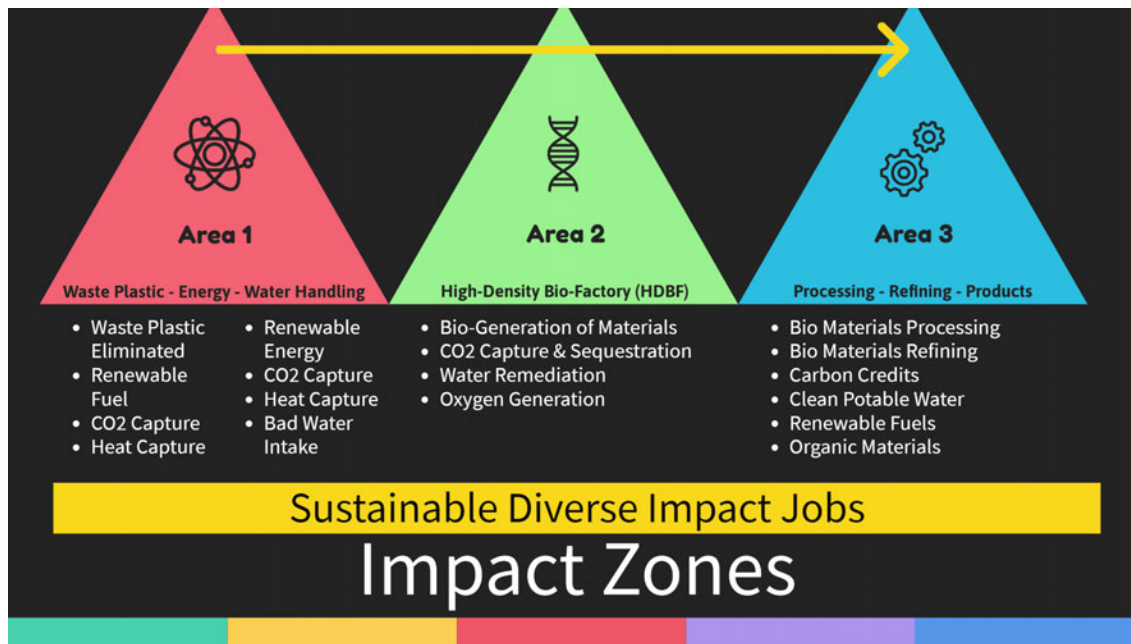
★ All Processes Replace or Displace Oil & Carbon from Wells

More detailed view

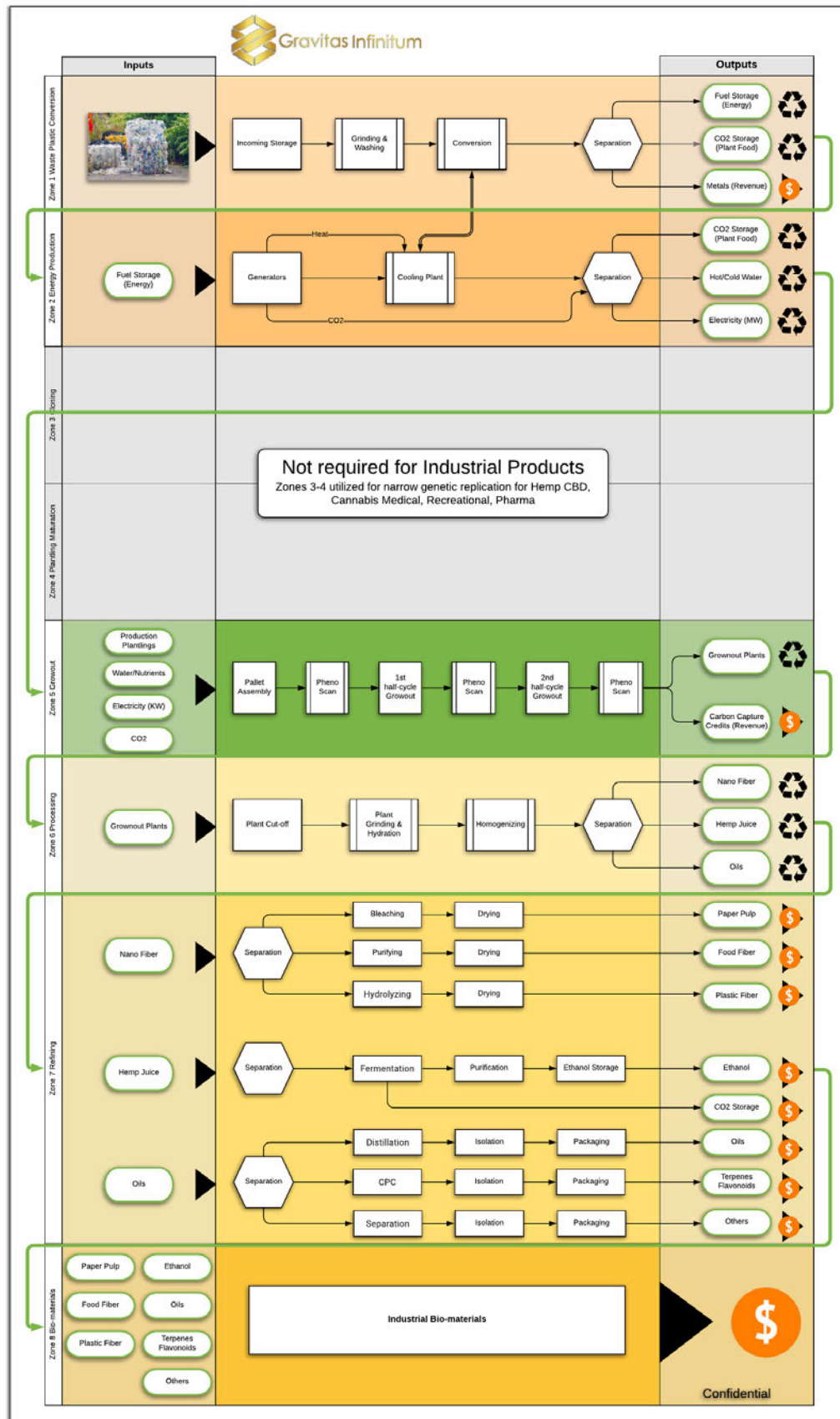


We have spent the last two years in design and engineering, and are working with 15-20 vendors, engineering firms, and banks. This is a modular system, each module is approximately a \$100mm investment, and they can be located anywhere.

Carbotura is a modular plant design that can be replicated on any continent on the planet. It has further sub-modularity in how the three primary "Areas" are enjoined. This allows for both geographic, horizontal, and vertical configuration flexibility to be able to put these anywhere. (Estimated approximate Cost per Ton of CAPEX amortization according to the capacity and type shown below) Total cost of CCS if amortizing complete plants cost is ~\$67 per ton.



Our plans have us building 36 of these modules over the next 5 years, providing when complete 82 megatons of CCS by 2040. With appropriate financing we can achieve a 1 gigaton goal.



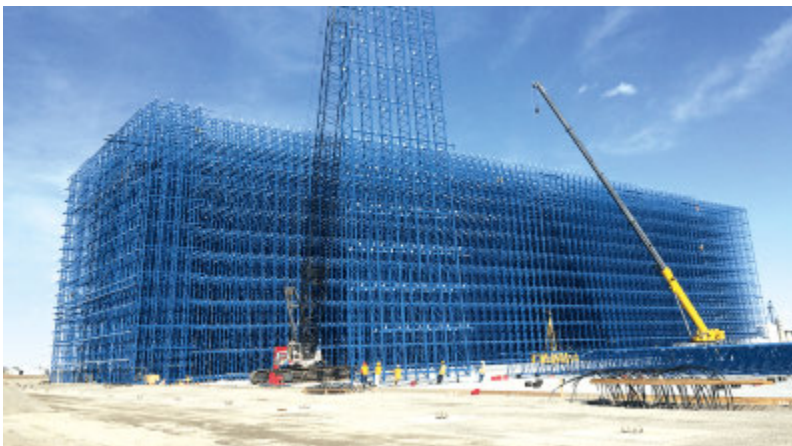
## Key components to our system

### ASRS - Automated Storage and Retrieval Systems

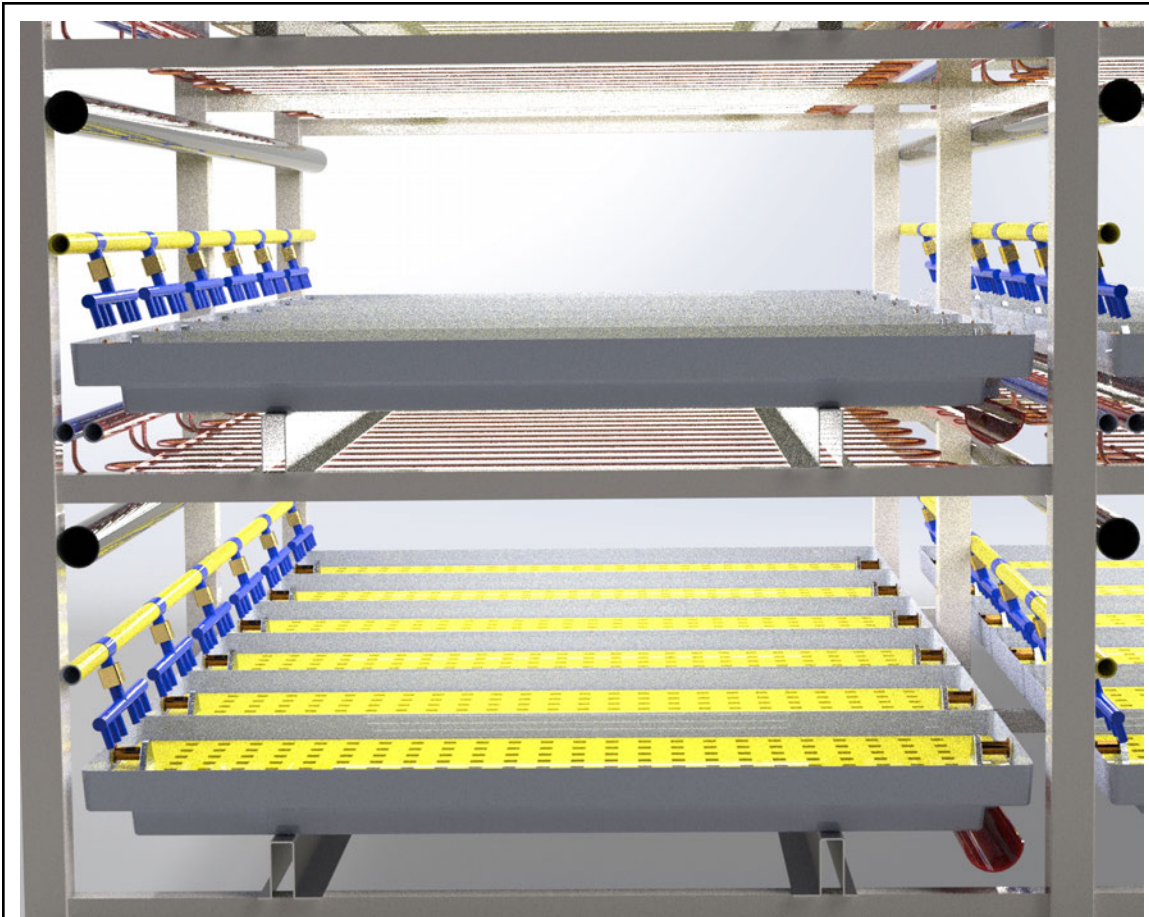
Use 1: These are utilized for the waste plastics intake storage. We are storing 30 days capacity to generate 5MW of energy continuously.

Use 2: This is the underlying system for the HDBF and Vertical Agriculture.

Use 3: Storage and warehousing of Biomaterials products.







[https://app.modelo.io/share-token/KyBR21\\_2D9](https://app.modelo.io/share-token/KyBR21_2D9) Digital Twin

### **Microwave Plasma Pyrolysis - Empowering Molecular Circularity**

Use: This technology is container mounted and modular. Its purpose is two-fold:

Break down all types of waste plastics into 6 basic molecular groups.

- CO<sub>2</sub>
- Syn-Gas
- Fuel Oil
- Char
- Hydrochloric Acid
- Metals

Break Down Flue Gases

- CO<sub>2</sub>
- Syn-Gas

1. plastic waste stacks of 36x48x72 will fit into the system

## 2. yield

4 plastics: PS, PP, LDPE and HDPE:

- PS consists 95% of Aromatic Hydrocarbons
- PP, HDPE and LDPE consist mainly of Aliphatic Hydrocarbons
- HDPE and LDPE and PP have functional groups consistent with commercial Diesel
- Pyoil from PS has chemical and physical properties similar to Gasohol 91

Yields of Oil

- PS 86.4%
- PP 89.5%
- LDPE 85.6%
- HDPE 86.9%
- Average Pyoil Calorific Value 43 KJ/KG -1
- Diesel Calorific Value 46 kj/kg -1

Similarity with Diesel %

- LDPE 96,89%
- HDPE 96, 75%
- PP 86,18%
- PS 17,90%

Similarity with Gasohol 91

- PS 66,35%
- PP 61,01%
- LDPE 62,80%
- HDPE 62.75%

The PVC and PET components will reduce the oil yield.

## 3. proposed fractions

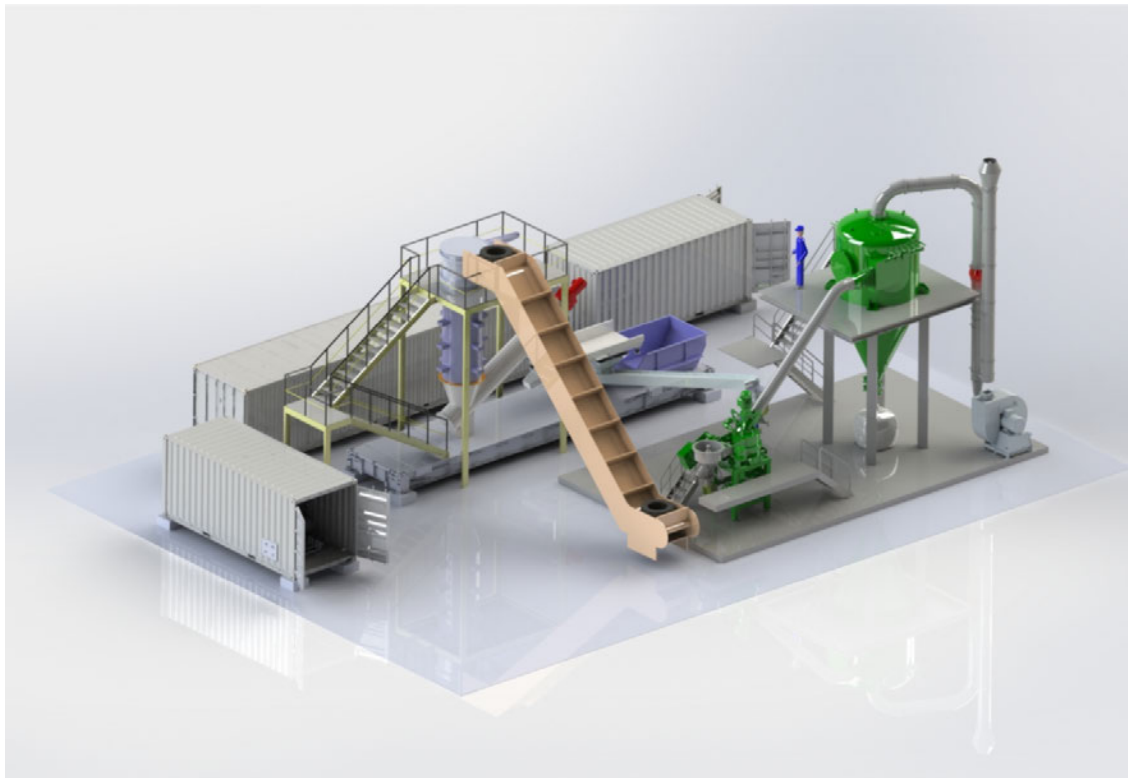
We would recommend to go for the following fractions

- dehydrochlorination for PVC components to get hydrochloric acid
- Gasohol 91 fraction from PS components
- diesel-like fraction from other plastics
- about 80% oil, 10% syngas, 10% char

## 4. char and metal

The metal will end up in the char.





## Energy Generation

3.5 MW Gas Turbine Power Generation System is modular power on the go! These units are complete, packaged power systems that incorporate the latest in proven design technology to achieve maximum reliability and extended time between overhauls making them ideal for operation in harsh and remote environments.

Its components include turbine, industry proven gearbox, generator and auxiliary systems with state-of-the-art control and monitoring capabilities. The unique combination of hardware in 1 MW power plant results in excellent heat recovery performance of a turbine at a cost that is competitive with conventional reciprocating engine generating systems. Maintenance downtime is minimal.

This containerized, single unit module is used to produce electricity in island mode or to generate power for connecting to the grid in a 24/7 application. Its rugged and compact design offers robust performance with operational energy savings to keep customer mission-critical facilities functioning without interruption.

Flue Gases are refed into microwave plasma pyrolysis for remediation.



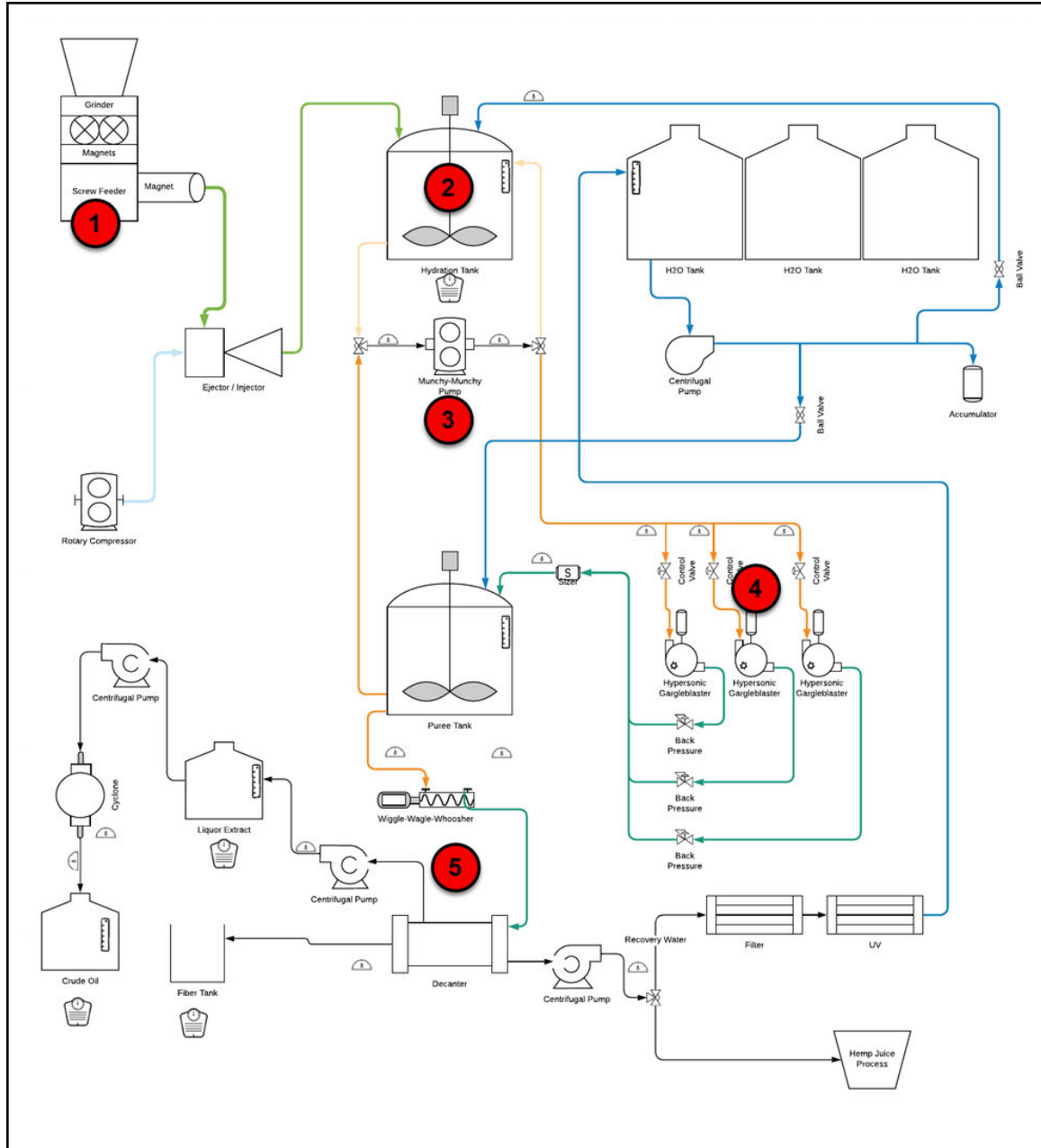
### **Biomaterials Nano-Processing**

Is a 5 step process to get to 3 buckets of separated raw commodity biomaterials.

Steps are:

1. Shredding of incoming biomass
2. Hydration of incoming biomass
3. Milling of hydrated biomass
4. Homogenization of biomass slurry
5. Separation of biomass soup

These systems are manufactured by multiple vendors, and assembled on site.



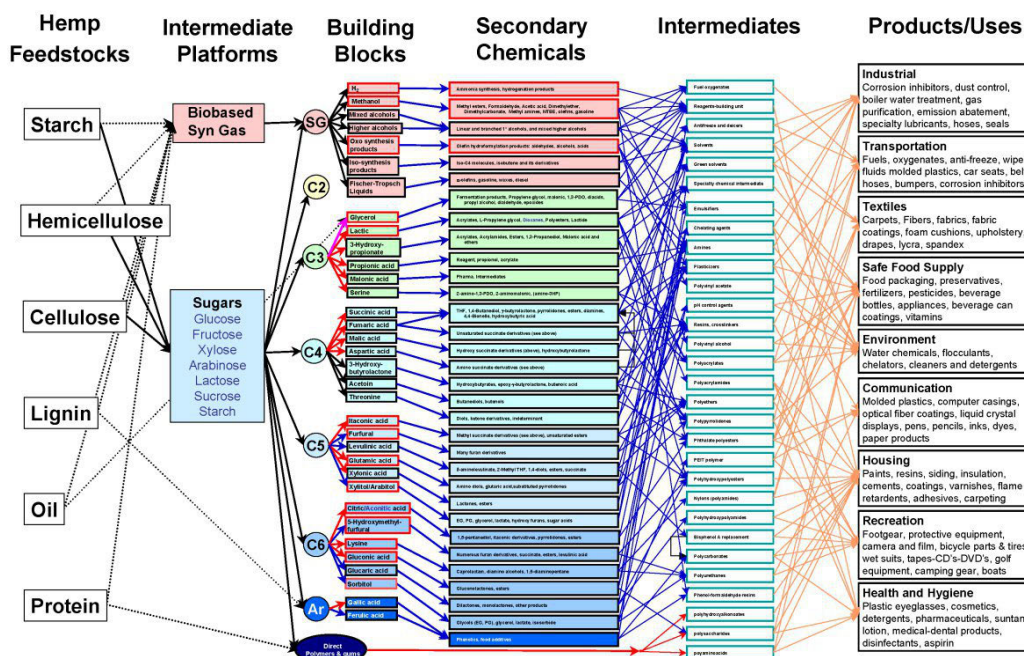


Figure 2 – Analogous Model of a Hemp Product Flow-chart for Hemp Feedstocks

## Partners

Morgan Stanley

For 85 years, Morgan Stanley has been a global leader in financial services, with the scale and stability to help bring you valuable opportunities. Our priority is managing wealth with the highest standard of care and providing financial advice to help support your goals at any stage of the business. The Company's business banking and money management, project financing is with Morgan Stanley.



The Company's business banking and operating accounts are also with Wells Fargo.



*Artistry. Transparency. Sincerity.*

At Seagate Development Group, we bring a team with extensive experience in all phases of the commercial development and construction process. Our team works diligently with our clients to develop detailed and reliable budgets and timeframes that are strictly adhered to. Beginning with site selection through entitlements, design services, and construction, Seagate Development Group has the experience and knowledge to guide the project successfully to completion on time and on budget.



Studio+ is an integrated services design firm focused on transforming the lives of those they touch. Architecture | Interior Design | Lean Design | Process Improvement | Master Planning | Feasibility Studies.



While building optimized solutions is paramount to the goals of SRSI, building lasting relationships is too. SRSI has gathered talented, like-minded professionals to partner with to ensure smooth, professional, and skilled implementation of our HDBF (High-Density Bio-Factory) strategy. To that end, our team stands ready to take on our next challenge.



Asentex is here to simplify your business in the age of Digital Transformation. It is crazy to see how many people are being forced into technology and having to make business critical decisions that virtually always includes some type of technology.



Driving profitability while tackling climate change is the defining global challenge of our age. Organizations face pressure to meet GHG regulations and adjust their supply chains.



The XO Company, Platform Software for company-wide operations, marketing, and sales. 100% Serverless, Multi-tenant Platform to build enterprise platforms.



For customers needing to increase the efficiency of their manufacturing or distribution centers, an automatic storage and retrieval system (ASRS) is the perfect solution. At ShayCore, we offer management of ASRS installation as one of our many industrial services.



Insurance | Risk Management | Consulting

Gallagher is a global leader in insurance, risk management & consulting services helping clients face challenges and providing effective solutions.



We are partnered with FGCU's Hemp Team.



- b. What is your role in this project, and who are the other actors that make this a full carbon removal solution? *(E.g. I am a broker. I sell carbon removal that is generated from a partnership between DAC Company and Injection Company. DAC Company owns the plant and produces compressed CO<sub>2</sub>. DAC Company pays Injection Company for storage and long-term monitoring.)*

We are project owner, developer and operator.

- c. What are the three most important risks your project faces?

1. We utilize a lot of steel, and prices fluctuate which can affect the amortized costs by 5-15%.
2. Un-anticipated Construction delays
3. Availability of capital for rapid expansion

- d. If any, please link to your patents, pending or granted, that are available publicly.

We protect our IP with Trade Secrets law.

## 2. Timeline and Durability (Criteria #4 and Criteria #5)

- a. Please fill out the table below.

	Timeline for Offer to Stripe
<p>Project duration</p> <p><i>Over what duration will you be actively running your DAC plant, spreading olivine, growing and sinking kelp, etc. to deliver on your offer to Stripe? E.g. Jun 2021 - Jun 2022. The end of this duration determines when Stripe will consider renewing our contract with you based on performance.</i></p>	<p>Project duration is 60 years after commissioning in 2022</p>

<p>When does carbon removal occur?</p> <p><i>We recognize that some solutions deliver carbon removal during the project duration (e.g. DAC + injection), while others deliver carbon removal gradually after the project duration (e.g. spreading olivine for long-term mineralization). Over what timeframe will carbon removal occur?</i></p> <p><i>E.g. Jun 2021 - Jun 2022 OR 500 years.</i></p>	<p>16 months after start of construction for 40-60 years continuously.</p>
<p>Distribution of that carbon removal over time</p> <p><i>For the time frame described above, please detail how you anticipate your carbon removal capacity will be distributed. E.g. “50% in year one, 25% each year thereafter” or “Evenly distributed over the whole time frame”. We’re asking here specifically about the physical carbon removal process here, NOT the “Project duration”. Indicate any uncertainties, eg “We anticipate a steady decline in annualized carbon removal from year one into the out-years, but this depends on unknowns re our mineralization kinetics”.</i></p>	<p>Our current plan has 36 modules up and running in 5 years</p>
<p>Durability</p> <p><i>Over what duration you can assure durable carbon storage for this offer (e.g, these rocks, this kelp, this injection site)? E.g. 1000 years.</i></p>	<p>CCS durability depends on products produced they can range from recycled products to &gt;1,000 years</p>

b. What are the upper and lower bounds on your durability claimed above in table 2(a)?

Forever to being continually recycled in a closed loop, i.e. Trapped and reused carbon in an infinite circular loop.

c. Have you measured this durability directly, if so, how? Otherwise, if you’re relying on the literature, please cite data that justifies your claim. (E.g. *We rely on findings from Paper\_1 and Paper\_2 to estimate permanence of mineralization, and here are the reasons why these findings apply to our system.* OR *We have evidence from this pilot project we ran that biomass sinks to D ocean depth. If biomass reaches these depths, here’s what we assume happens based on Paper\_1 and Paper\_2.*)

Depends on product output vector, some have been measured, ref:  
<https://hemp-copenhagen.com/images/Hemp-cph-Carbon-sink.pdf>

- d. What durability risks does your project face? Are there physical risks (e.g. leakage, decomposition and decay, damage, etc.)? Are there socioeconomic risks (e.g. mismanagement of storage, decision to consume or combust derived products, etc.)? What fundamental uncertainties exist about the underlying technological or biological process?

Since we are a DAC solution we promote a carbon trapped circular economy type of durability instead of drilling more carbon out of the ground utilizing the atmospheric carbon for products and thus the durability is infinite, when kept in the economic loop.

- e. How will you quantify the actual permanence/durability of the carbon sequestered by your project? If direct measurement is difficult or impossible, how will you rely on models or assumptions, and how will you validate those assumptions? *(E.g. monitoring of injection sites, tracking biomass state and location, estimating decay rates, etc.)*

We are working with Southpole, Verra, and Gold Standard, along with major financial institutions to develop a cellular carbon credit system that looks at processes that capture and sequester and these can be chained together in any form of circular closed loop economy models.

### 3. Gross Capacity (Criteria #2)

- a. Please fill out the table below. **All tonnage should be described in metric tonnes here and throughout the application.**

	Offer to Stripe (metric tonnes CO <sub>2</sub> ) over the timeline detailed in the table in 2(a)
Gross carbon removal  Do not subtract for embodied/lifecycle emissions or permanence, we will ask you to subtract this later	Since our project is modular we will illustrate both 1 modules and our 5 year planned 36 Modules  <ol style="list-style-type: none"> <li>1. Single module over 60 year life = 7,665,000 Tons CO<sub>2</sub></li> <li>2. 36 planned modules 60 year life = 275,940,000 Tons CO<sub>2</sub></li> </ol>
If applicable, additional avoided emissions	Since we generate our own power and close loop the flue gases we are not only negative emissions,

e.g. for carbon mineralization in concrete production, removal would be the CO <sub>2</sub> utilized in concrete production and avoided emissions would be the emissions reductions associated with traditional concrete production	<p>but avoid all emissions equated to utility power usage.</p> <ol style="list-style-type: none"> <li>1. Single module over 60 years avoided emissions = 2,629,800 Tons CO<sub>2</sub></li> <li>2. 36 planned modules 60 year life = 94,672,800 Tons CO<sub>2</sub></li> </ol>
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- b. Show your work for 2(a). How did you calculate these numbers? If you have significant uncertainties in your capacity, what drives those? (E.g. *This specific species sequesters X tCO<sub>2</sub>/t biomass. Each deployment of our solution grows on average Y t biomass. We assume Z% of the biomass is sequestered permanently. We are offering two deployments to Stripe.  $X*Y*Z*2 = 350 \text{ tCO}_2 = \text{Gross removal}$ . OR Each tower of our mineralization reactor captures between X and Y tons CO<sub>2</sub>/yr, all of which we have the capacity to inject. However, the range between X and Y is large, because we have significant uncertainty in how our reactors will perform under various environmental conditions*)

Our Bio-factories convert Carbon to CO<sub>2</sub> (12T of C equals 44T of CO<sub>2</sub>(IPCC)), that represents 1.63 tonnes of CO<sub>2</sub> absorption per tonne of biomass harvested.

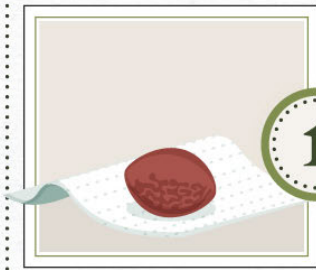
- c. What is your total overall capacity to sequester carbon at this time, e.g. gross tonnes / year / (deployment / plant / acre / etc.)? Here we are talking about your project / technology as a whole, so this number may be larger than the specific capacity offered to Stripe and described above in 3(b). We ask this to understand where your technology currently stands, and to give context for the values you provided in 3(b).

All technologies and science is proven and has existed for years. Our combination is novel, as is the integration of automation. Module 1 is in the site selection process and construction for commissioning mid 2022. There is a 90 day startup period to ramp up to full capacity of 350 Tons CO<sub>2</sub> per day.

- d. We are curious about the foundational assumptions or models you use to make projections about your solution's capacity. Please explain how you make these estimates, and whether you have ground-truthed your methods with direct measurement of a real system (e.g. a proof of concept experiment, pilot project, prior deployment, etc.). We welcome citations, numbers, and links to real data! (E.g. *We assume our sorbent has X absorption rate and Y desorption rate. This aligns with [Sorbent\_Paper\_Citation]. Our pilot plant performance over [Time\_Range] confirmed this assumption achieving Z tCO<sub>2</sub> capture with T tons of sorbent.*)

We utilize industrial hemp grown in large scale vertical hydroponic farming systems. Growth

rates are known and cataloged.



1

### Germination/Seed 1-2 weeks

Seeds ready for germination are dark brown, hard, and dry. Encourage sprouting by watering seeds in a paper towel.



2

### Seedling 2-3 weeks

Move seeds into growing medium. Plants need the maximum light at this stage, and appropriate water levels. Cotyledon (seed leaves) and iconic fan leaves will grow.



3

### Vegetative 2-8 weeks

Plants need flowing dry air, fresh warm water, and increased nutrients – especially nitrogen.

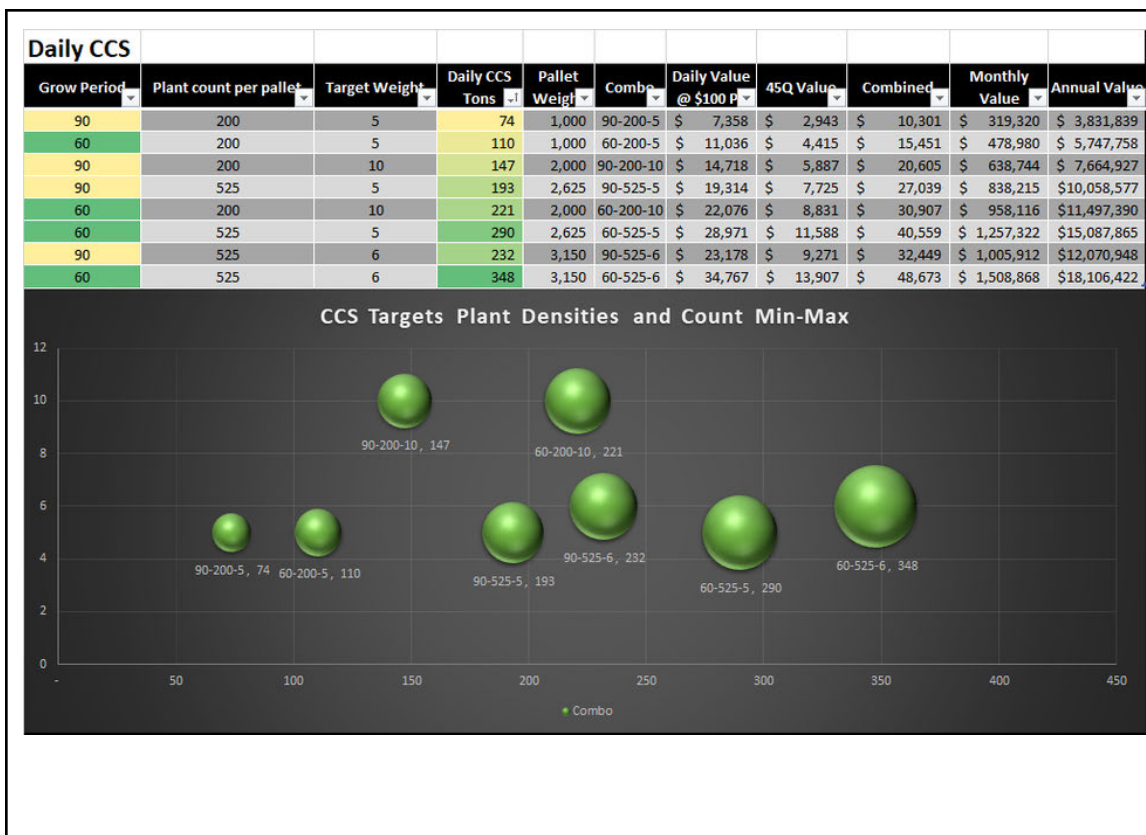
**Important:** *Separate male and female plants before pollination to prevent female plants producing seeds instead of trichomes.*



4

### Flowering 6-8 weeks

Gradually reduce light exposure to produce medicinal qualities. Increase phosphorous levels and decrease nitrogen. Fertilizers can help stimulate bud formation.



- e. Documentation: If you have them, please provide links to any other information that may help us understand your project in detail. This could include a project website, third-party documentation, project specific research, data sets, etc.

[Carbotura 2020](https://www.carbotura.com)

<https://www.carbotura.com>

Due Diligence Room available under NDA

#### 4. Net Capacity / Life Cycle Analysis (Criteria #6 and Criteria #8)

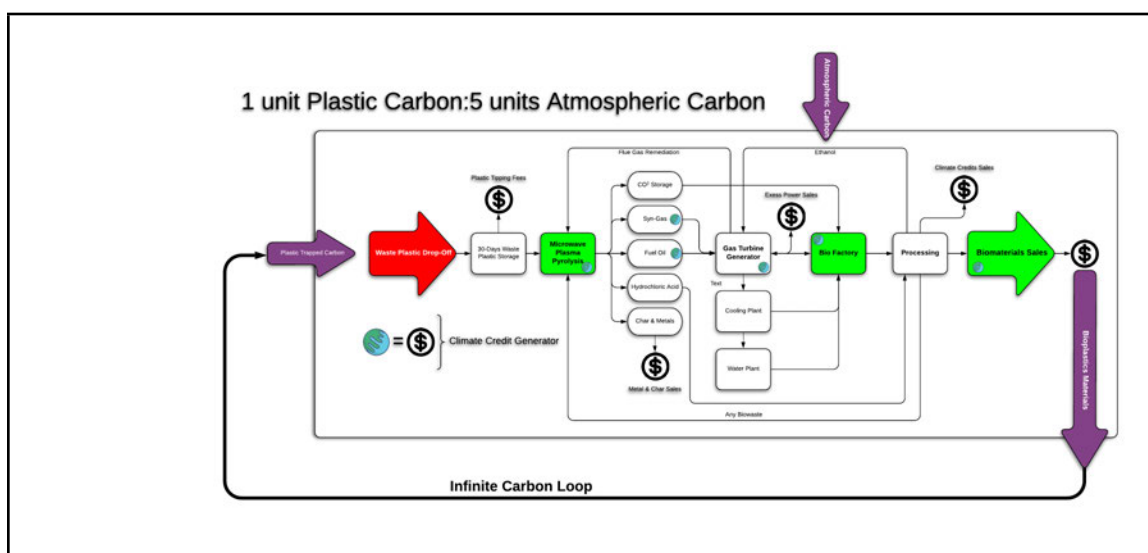
- a. Please fill out the table below to help us understand your system's efficiency, and how much your lifecycle deducts from your gross carbon removal capacity.

	Offer to Stripe (metric tonnes CO <sub>2</sub> )
Gross carbon removal	1. 1 Module 7,665,000 Tons CO <sub>2</sub> ; or 2. 36 Modules 275,940,000 Tons CO <sub>2</sub>



Gross project emissions	<ol style="list-style-type: none"> <li>1 Module -10,294,800 Tons CO2</li> <li>36 Modules -370,612,800 Tons CO2</li> </ol>
Emissions / removal ratio	(0.34)
Net carbon removal	<ol style="list-style-type: none"> <li>1 Module -10,294,800 Tons CO2</li> <li>36 Modules -370,612,800 Tons CO2</li> </ol>

- b. Provide a carbon balance or “process flow” diagram for your carbon removal solution, visualizing the numbers above in table 4(a). Please include all carbon flows and sources of energy, feedstocks, and emissions, with numbers wherever possible (*E.g. see the generic diagram below from the CDR Primer, Charm’s application from last year for a simple example, or CarbonCure’s for a more complex example*). If you’ve had a third-party LCA performed, please link to it.



- c. Please articulate and justify the boundary conditions you assumed above: why do your calculations and diagram include or exclude different components of your system?

We take in waste plastics with an average of 6 pounds of CO<sub>2</sub> per pound of Plastic, break it down to primary molecules and utilize it as food and fuel for large scale vertical farm that also takes in atmospheric CO<sub>2</sub> and consumes it at a ratio of 1:5, 1 part plastic CO<sub>2</sub> to 5 parts atmospheric. Most of the plastic carbon is converted to light, energy, heat, and then biomaterials.

- d. Please justify all numbers used in your diagram above. Are they solely modeled or have you measured them directly? Have they been independently measured? Your answers can include references to peer-reviewed publications, e.g. [Climeworks LCA paper](#).

These are modeled on known mass numbers; there are two inputs, waste plastics with known carbon content 6 pounds of carbon per 1 pound of plastic, with most of that being converted into heat and light and energy and fed to the plants, any residual carbon emissions is fed back into the biofactory to the plants, where it is compressed and mixed with atmospheric CO<sub>2</sub>. There is one biomaterial output. Primarily Nano Cellulose. Efficiency on CCS/DACS is 5 parts atmospheric carbon to 1 part plastic carbon, with primary benefits being elimination of waste plastics, creation of biomaterials, and DACS, an optional side benefit is remediation of agricultural run-off water.

- e. If you can't provide sufficient detail above in 4(d), please point us to a third-party independent verification, or tell us what an independent verifier would measure about your process to validate the numbers you've provided. (We may request such an audit be performed.)

We are conducting multiple circular LCA analysis with third parties at this time. We are also working on Tokenization of our capacity and CLimate/Carbon credits.

## 5. Learning Curve and Costs (Backward-looking) (Criteria #2 and #3)

We are interested in understanding the [learning curve](#) of different carbon removal technologies (i.e. the relationship between accumulated experience producing or deploying a technology, and technology costs). To this end, we are curious to know how much additional deployment Stripe's procurement of your solution would result in. (There are no right or wrong answers here. If your project is selected we may ask for more information related to this topic so we can better evaluate your progress.)

- a. Please define and explain your unit of deployment. (E.g. # of plants, # of modules) (50 words)

1 module 100-350 tons per day depending on capacity planning.

- b. How many units have you deployed from the origin of your project up until today? Please fill out the table below, adding rows as needed. Ranges are acceptable if necessary.

Year	Units deployed (#)	Unit cost (\$/unit)	Unit gross capacity (tCO <sub>2</sub> /unit)	Notes

2022	1	\$100,000,000	100-350 Tons per day	12-14 month build cycle, Modules being commissioned every 90 days
2023	5	\$90,000,000	100-350 Tons per day	<50 words
2024	12	\$75,000,000	100-350 Tons per day	<50 words
2025	18	\$75,000,000	100-350 Tons per day	

- c. Qualitatively, how and why have your deployment costs changed thus far? (E.g. *Our costs have been stable because we're still in the first cycle of deployment, our costs have increased due to an unexpected engineering challenge, our costs are falling because we're innovating next stage designs, or our costs are falling because with larger scale deployment the procurement cost of third party equipment is declining.*)

Land and steel costs are the variables to watch

- d. How many additional units would be deployed if Stripe bought your offer? The two numbers below should multiply to equal the first row in table 3(a).

# of units	Unit gross capacity (tCO <sub>2</sub> /unit)
1. 1 Module offer will create 2 additional modules	1. 22,995,000 Tons CO <sub>2</sub>
2. 36 Modules offer will create 3x or 108 modules	2. 827,820,000 Tons CO <sub>2</sub>

## 6. Cost and Milestones (Forward-looking) (Criteria #2 and #3)

We ask these questions to get a better understanding of your growth trajectory and inflection points, there are no right or wrong answers. If we select you for purchase, we'll expect to work with you to understand your milestones and their verification in more depth.

- a. What is your cost per ton CO<sub>2</sub> today?

~\$67 per ton CO<sub>2</sub> with DACS this reduces with scale. We do have methods of reducing this cost with the nature of our multi-revenue stream business that is integral to DACS, we

welcome discussions on this.

- b. Help us understand, in broad strokes, what's included vs excluded in the cost in 6(a) above. We don't need a breakdown of each, but rather an understanding of what's "in" versus "out."

All in

- c. List and describe **up to three** key upcoming milestones, with the latest no further than Q2 2023, that you'll need to achieve in order to scale up the capacity of your approach.

Milestone #	Milestone description	Why is this milestone important to your ability to scale? (200 words)	Target for achievement (eg Q4 2021)	How could we verify that you've achieved this milestone?
1	Finalize \$20mm in funding	1st module funding	Q2-2021	We have indicative commitments on 80% of Module 1
2	Final EPC Package Complete	Cannot start without completion guarantees in place from EPC	Q2-2021	We can send you contracts when executed
3	Start Construction	Got to build it	Q3-2021	Pictures, Online Progress Portal
4	Commission Plant	The start of CCS	Q3-2022	Pictures, News, Online Progress Portal
5	First Carbon Credits	One of the reasons we are doing this	Q4-2022	Check the CCS Registries or our Tokenization Blockchain, Online Progress Portal

6	Modules 2-36	We have a hot planet to repair	Q2-2023	Online Progress Portal
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i. How do these milestones impact the total gross capacity of your system, if at all?

Milestone #	Anticipated total gross capacity prior to achieving milestone (ranges are acceptable)	Anticipated total gross capacity after achieving milestone (ranges are acceptable)	If those numbers are different, why? (100 words)
1-5	These are build delivery milestones		
6	100-350 Tons per day	N times capacity	

d. How do these milestones impact your costs, if at all?

Milestone #	Anticipated cost/ton prior to achieving milestone (ranges are acceptable)	Anticipated cost/ton after achieving milestone (ranges are acceptable)	If those numbers are different, why? (100 words)
6	\$67 per ton	Disregarding inflation costs will reduce as volume of modules grow by about 25%, estimated \$50 per ton	Scale and buying power, repeatable building efficiencies

e. If you could ask one person in the world to do one thing to most enable your project to achieve its ultimate potential, who would you ask and what would you ask them to do?

Any Billionaire to provide a loan for modules, we will pay them back. Please stop donating to greenwashing non-profits, help our "Hot Planet Repair Team"

f. Other than purchasing, what could Stripe do to help your project?

There are multiple ways Stripe can help our project, and we would welcome your help

regardless of you buying or not.

A Short List:

1. We can arrange funding if your balance sheet is behind us. (LOC, or some credit backing) we have a bank that will loan to us.
2. We can attract investors and off-takers if you help support our “Hot Planet Repair Team”
3. Help us form a \$100,000,000,000 SPAC and we can get the cost down to \$22 per ton and build several hundred modules, employ and feed 100,000’s of people. (We have the Banker to run the SPAC raise.
4. Support our Cellular Climate Credits Exchange Platform Thesis to start enabling infinite carbon economy loops, this is where we tokenize our various attributes/credits; Plastics, Renewable Energy, Carbon, etc
5. Or; introduce our project to all of your credit card popups and we will give a piece of the project and credits to every person

## 7. Public Engagement and Environmental Justice (Criteria #7)

In alignment with Criteria 7, Stripe requires projects to consider and address potential social, political, and ecosystem risks associated with their deployments. Projects with effective public engagement tend to do the following:

- Identify key stakeholders in the area they’ll be deploying
- Have some mechanism to engage and gather opinions from those stakeholders and take those opinions seriously, iterating the project as necessary.

The following questions are for us to help us gain an understanding of your public engagement strategy. There are no right or wrong answers, and we recognize that, for early projects, this work may not yet exist or may be quite nascent.

- a. Who are your external stakeholders, where are they, and how did you identify them?

Please see SDG Performance

[https://gravitasinfinitum-my.sharepoint.com/:b:/p/alw/EVSd3NhvKcNGjg\\_NCbDqZaoBW8iCxwD2cxAUW7F9dmByyg?e=XE6WEO](https://gravitasinfinitum-my.sharepoint.com/:b:/p/alw/EVSd3NhvKcNGjg_NCbDqZaoBW8iCxwD2cxAUW7F9dmByyg?e=XE6WEO)

- b. If applicable, how have you engaged with these stakeholders? Has this work been performed in-house, with external consultants, or with independent advisors?

<100 words

- c. If applicable, what have you learned from these engagements? What modifications have you already made to your project based on this feedback, if any?



<100 words

- d. Going forward, do you have changes planned that you have not yet implemented? How do you anticipate that your processes for (a) and (b) will change as you execute on the work described in this application?

<100 words

- e. What environmental justice concerns apply to your project, if any? How do you intend to consider or address them?

<100 words

## 11. Legal and Regulatory Compliance (Criteria #7)

- a. What legal opinions, if any, have you received regarding deployment of your solution?

Multiple Due diligence reviews by Banking Attorneys

- b. What permits or other forms of formal permission do you require, if any? Please clearly differentiate between what you have already obtained, what you are currently in the process of obtaining, and what you know you'll need to obtain in the future but have not yet begun the process to do so.

Preliminary approval on projects in 3 counties, site selection is going through height variance with the county.

- c. In what areas are you uncertain about the legal or regulatory frameworks you'll need to comply with? This could include anything from local governance to international treaties. For some types of projects, we recognize that clear regulatory guidance may not yet exist.

None

## 12. Offer to Stripe

This table constitutes your offer to Stripe, and will form the basis of our expectations for contract discussions if you are selected for purchase.

	Offer to Stripe
<b>Net carbon removal</b> (metric tonnes CO <sub>2</sub> )	<ol style="list-style-type: none"> <li>1 Module 7,665,000 Tons CO<sub>2</sub>; or</li> <li>36 Modules 275,940,000 Tons CO<sub>2</sub></li> </ol>
<b>Delivery window</b> (at what point should Stripe consider your contract complete?)	60 years from commissioning of modules
<b>Price</b> (\$/metric tonne CO <sub>2</sub> ) <i>Note on currencies: while we welcome applicants from anywhere in the world, our purchases will be executed exclusively in USD (\$). If your prices are typically denominated in another currency, please convert that to USD and let us know here.</i>	<p>Short-term Contract: Term 10 years, price per ton, tonnage offering is ⅓ of above amount at \$75 per ton.</p> <p>Pay as you go contract: Term 60 years, Cost per ton \$35</p> <p>Prepaid Contract: Term 60 Years, \$16 per ton</p>

# Application Supplement: Biomass

(Only fill out this supplement if it applies to you)

## Feedstock and Physical Footprint (Criteria #1)

1. What type of biomass does your project rely on?

Hemp or Red Rye. Note: use of Red Rye reduces energy requirements by 60% and also reduces plastics elimination by that same percentage.

2. Are you growing that biomass yourself, or procuring it, and from whom?

It is grown in our High-density Bio-Factories

3. Please fill out the table below regarding your feedstock's physical footprint. If you don't know (e.g. you procure your biomass from a seller who doesn't communicate their land use), indicate that in the table.

	Area of land or sea (km <sup>2</sup> ) in 2021	Competing/existing project area use (if applicable)
Feedstock cultivation	0.0232 KM2	
Processing	Included Above	
Long-term Storage	Included Above	

4. Imagine, hypothetically, that you've scaled up and are sequestering 100Mt of CO<sub>2</sub>/yr. Please project your footprint at that scale (we recognize this has significant uncertainty, feel free to provide ranges and a brief description).

	Projected # of km <sup>2</sup> enabling 100Mt/yr	Projected competing project area use (if applicable)
Feedstock cultivation	0.303Sq. kilometers	

Processing	Included above	
Long-term Storage	Included Above	

## Permanence, Additionality, Ecosystem Impacts (Criteria #4, #6, and #7)

5. How is your biomass processed to ensure its permanence? What inputs does this process require (e.g. energy, water) and how do you source these inputs? (You should have already included their associated carbon intensities in your LCA in Section 6.)

Our biomass is processed into nano cellulose crystals for use in bio-plastics, which now enter an infinite closed carbon loop and every cycle it picks up 5 parts atmospheric carbon to 1 part plastics

6. (Criteria 6) If you didn't exist, what's the alternative use(s) of your feedstock? What factors would determine this outcome? *(E.g. Alternative uses for biomass include X & Y. We are currently the only party willing to pay for this biomass resource. It's not clear how X & Y would compete for the biomass resources we use. OR Biomass resource would not have been produced but for our project.)*

There are over 50,000 uses documented on our outputs into products

7. We recognize that both biomass production and biomass storage can have complex interactions with ecological, social, and economic systems. What are the specific negative impacts (or important unknowns) you have identified, and what are your specific plans for mitigating those impacts (or resolving the unknowns)? *(200 words)*

We are zero-waste closed loop

8. Biomass-based solutions are currently being deployed around the world. Please discuss the merits and advantages of your solution in comparison to other approaches in this space.

*No Dirt, automated, Vertical farming, can include food production, the most efficient system, 1 sq foot of our capacity = 9,620 sq feet of outdoor capacity.*