<table>
<thead>
<tr>
<th><strong>Docket Number:</strong></th>
<th>20-FINANCE-01</th>
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<tbody>
<tr>
<td><strong>Project Title:</strong></td>
<td>Strategies to Attract Private Investment in Zero Emission Vehicle Charging Infrastructure and Other Clean Transportation Projects</td>
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<tr>
<td><strong>TN #:</strong></td>
<td>232701</td>
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<td><strong>Document Title:</strong></td>
<td>Increase Private Investment and Clean Transportation utilizing Continuous Anaerobe Fermentations System (CAFS)</td>
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<tr>
<td><strong>Description:</strong></td>
<td>N/A</td>
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<td><strong>Filer:</strong></td>
<td>System</td>
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<tr>
<td><strong>Organization:</strong></td>
<td>Mike Cox</td>
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<td><strong>Submitter Role:</strong></td>
<td>Applicant</td>
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<td><strong>Submission Date:</strong></td>
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Increase Private Investment and Clean Transportation utilizing Continuous Anaerobe Fermentations System (CAFS)

Additional submitted attachment is included below.
Response to

Request for Information - Strategies to Attract Private Investment in Zero Emission Vehicle Charging Infrastructure and Other Clean Transportation Projects – February 2020
Docket # 20-FINANCE-01

Continuous Anaerobic Fermentation Systems (CAFS)

Points of Contact
Mike Cox, CEO Anaerobe Systems
mcox@anaerobesystems.com
408-591-5001 (mobile)
Recognized leader in Anaerobe science and application for 40 years.

Numerous U.S. and foreign patents and applications.

Mike Cox, CEO

Mike is a founding board member Anaerobe Society of the Americas, recipient of their Lifetime Achievement Award.

Co-author of the CLSI M56-A guideline “Principles and Procedures for Detection of Anaerobes in Clinical Specimens”

10+ years plant fermentation science, refinement and commercialization.
It all starts with understanding Sustainable Development

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

— World Commission on Environment and Development, Our Common Future (1987)
Farmers, and Governments spend hundreds of billions of dollars annually to control and dispose of Ag Waste and Invasive Plants.

Greenhouse gases,
Land contamination
Environmentally challenging

Cornell University researchers estimate invasive species cause $120B damage in the United States each year.
According to Flavin and Lenssen of the Worldwatch Institute, "If the contribution of biomass to the world energy economy is to grow, technological innovations will be needed, so that biomass can be converted to usable energy in ways that are more efficient, less polluting, and at least as economical as today's practices."

Technology Problem

These processes take weeks to months.
Plant Waste

is

now

Fuel Grade Produce
A new Commodity for the Farmer

Our Solution
CAFS is Scalable, Adaptable, and Local

Local Processing Plant Sourced Materials
Invasive Species
Agricultural Waste

Hydrogen
CO$_2$ + KOH = potassium carbonate fertilizer
Liquid Fertilizer
Solid Soil Amendments

2-day process vs weeks or months
Complete Circular Agriculture

CAFS is Scalable, Adaptable, and Local
CAFS is Modular and Highly Configurable

Feed tank

Grinding / prep

Heat exchanger / sterilizer

Boiler

Starter culture

Fermenter

Stage 1

Stage 2

Stage 3

Proprietary microbiology / chemistry

K₂CO₃

H₂

CO₂

Hydrogen

Scrubber

Centrifuge

Liquid fertilizer

Solids => biochar
Why Anaerobe Energy?

- Sustainable, scalable and exceptionally eco-friendly.
- We eliminate 100% of the GHG generated by current processes
- We produce “clean” Hydrogen; no additional processing
- We own the Patent for CAFS
Automated Operations

Fuel Grade Produce; example from Carrot processing

Full R&D Lab
**Phase 1 ($3M) Invested**

Business Development
- $2000 Revenue
- Validated customer needs
- Established key contacts:
  - Farms and Processing Plants
  - Government
  - Infrastructure

Product Development
- 1500 gal. system in operation
- Science and design validated.
- Upgraded to “like new”.
- CAFS Patent Issued.

Operations
- Anaerobe Systems Operational since 1978
- 5 Employees dedicated to Anaerobe Energy.

- Carrot Pulp
- Water Hyacinth

- High Value
- High Margin

We are not currently capturing the Hydrogen.
Phase 2 (Cost $7.5M)

Strategic Plan

1. Secure $7.5M private funding for a Sept 2020 start.

2. Build a 4000-gallon production system, demonstrate science and patent, generate revenue.

3. Help establish permitting specifications, metrics and requirements with local and state officials; get permitted.

4. Build value, validate business case.

5. Acquisition 3 – 5 years after funding (August 2020)

Total Revenue: $24M - $40M through 2024.
The Opportunity

Management and Disposal of Agriculture Waste and Invasive Plants
Utilizing Continuous Anaerobic Fermentation

Circular Agriculture
Delivering High Value Product to Farms, Consumers and Low Yield Land

Hydrogen Production
Network of Micro Refueling Stations; Large Scale Facilities

Carbon Credits

- 77,000 Farms in Ca.
- 25.3M Acres in Ca.
- 2.048M Farms in US.
- 911M Acres in US.
The Opportunity

$200B Ag Fertilizer Market

US Fertilizer
$6.4Bn
By 2025

Soil Amendments
$39.5Bn
By 2021

Growing Demand for Next Generation Organic Plant and Soil Food
$130B Hydrogen Market (2017)

$200Bn by 2025
CAGR of 6.1%

FINANCIAL TIMES

Create a Network of micro-hydrogen refueling stations

Japan is betting future cars will use hydrogen fuel cells

Honda and Toyota think the technology's superior energy density will triumph over batteries
Funding

We need $7.5M to fund our 36-month plan to build a 4000-gallon Production CAFS and get acquired. This is the only funding necessary; no additional funding round is anticipated.

We believe this is a technology acquisition that can be executed in 3 years from funding. Our goal is to scale, continuing to demonstrate/validate the science and business case then sell, license, etc. the technology/patent to a large-scale buyer that has the resources to scale.

We believe State funding will validate the demand resulting in stronger Private Investment and is a very attractive option to:
• Meet the goals of CEC technical, environmental and financial.
• Rapidly bring sustainable technology to market that has a broad environmental and financial impact.
• Deliver short term ROI to investors.

We look forward to the opportunity to work with CEC and bring this technology to market.