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Community BioRefineries, LLC |

Community BioRefinery: The Future of Renewable Energy and Your Next Big Investment

In today's world, sustainable solutions are no longer optional—they're essential. The Community BioRefinery (CBR) is here to revolutionize renewable energy with a transformative technology that doesn't just meet these demands but surpasses them. Combining cutting-edge innovation with a strategy tailored for long-term growth, CBR offers investors the chance to be part of a greener, cleaner future—and to enjoy unparalleled financial rewards in the process.

What is the Community BioRefinery?

The Community BioRefinery is a groundbreaking solution for producing renewable energy. It tackles the three biggest challenges in biobutanol production—scalability, cost-efficiency, and technological barriers—unlocking the full potential of sustainable fuels. Using a validated continuous-flow Acetone-Butanol-Ethanol (ABE) fermentation process, CBR redefines how we create and consume energy. This innovation sets the stage for domination in three high-growth markets:

- **Sustainable Aviation Fuel (SAF):** Decarbonizing aviation through Alcohol-to-Jet (ATJ) technology.
- **Renewable Fuel Blending:** A superior alternative to ethanol for green fuel integration.
- **Green Electricity:** Leveraging co-products like hydrogen, acetone, and ethanol to generate scalable, sustainable power.

Why Biobutanol is the Next-Generation Biofuel

Biobutanol isn't just another renewable fuel—it's *the* biofuel of the future. With unparalleled advantages over its predecessors, it's set to redefine energy production and usage across industries. Here's why:

1. High Energy Density

Biobutanol's energy density is **29.2 MJ/L**, making it comparable to gasoline (**31 MJ/L**) and far superior to ethanol (**21.1 MJ/L**). This higher energy content translates into longer travel distances and greater efficiency, which is crucial for energy-intensive sectors like aviation and freight transport. (MJ/L = Megajoules per Liter)

2. Drop-In Compatibility

Unlike ethanol, biobutanol integrates seamlessly into existing pipelines, storage systems, and engines without requiring expensive retrofits:

- **Non-Corrosive:** It won't degrade pipelines or storage tanks or fuel systems.
- **Engine-Ready:** Biobutanol blends easily with gasoline and can be used in standard engines without modifications.

This compatibility significantly reduces infrastructure costs, making it a more economical and scalable solution for widespread adoption.

3. Significant GHG Reductions

Biobutanol reduces lifecycle greenhouse gas (GHG) emissions by up to **80%** compared to traditional gasoline. Its production uses waste biomass like agricultural residues, ensuring sustainability and avoiding competition with food crops.

4. Versatility Across Industries

Biobutanol isn't just for vehicles. Its potential spans multiple sectors:

- **Aviation:** A critical feedstock for Sustainable Aviation Fuel (SAF), helping airlines meet decarbonization mandates.

- **Blending:** A high-performing alternative to ethanol in renewable fuel blends, as well as being transmissible through pipelines (unlike ethanol).
- **Green Electricity:** Its co-products power hydrogen fuel cells and decentralized grids.
- **Industrial Uses:** Biobutanol serves as a solvent in plastics, coatings, and chemical industries.

The Biobutanol Advantage: A Comparison - Ethanol vs. Biobutanol

<u>Feature</u>	<u>Ethanol</u>	<u>Biobutanol</u>
Energy Density	21.1 MJ/L	29.2 MJ/L
Corrosion Risk	High	None
Blending Limits	15% (E15)	Higher blends possible
Pipeline Use	Limited	Fully compatible

A Comparison - Hydrogen vs. Biobutanol

<u>Feature</u>	<u>Hydrogen</u>	<u>Biobutanol</u>
Infrastructure	Requires overhaul	Compatible
Production Cost	High	Economical
Co-Products	None	Valuable (acetone, ethanol)

How Community BioRefinery Makes Biobutanol Work

CBR's innovative technology overcomes the historical challenges of biobutanol production:

1. **Continuous-Flow ABE Fermentation:** Unlike slow, wasteful batch fermentation, CBR's process runs continuously, maximizing output and efficiency.
2. **Energy Optimization:** Advanced separation techniques reduce energy costs by up to **40%**, making biobutanol production financially viable.
3. **Scalability:** Modular facility designs allow for rapid expansion to meet global demand without requiring exorbitant capital investment.

Funding Requirements

CBR is seeking **\$100 million** to fund its first production facility, strategically divided into three phases:

1. **Planning and Engineering (\$5M):**
 - Finalize designs, secure permits, and establish feedstock agreements.
 - Timeline: 6–12 months.
2. **Pilot/Demonstration-Scale Operations** (\$25M):**
 - Build and operate a smaller facility to validate full-scale metrics.
 - Timeline: 12–18 months.
3. **Full-Scale Construction (\$70M):**
 - Construct a facility producing **5 million gallons of biobutanol annually**.
 - Timeline: 24–36 months.

****Facility design includes Pilot and Demonstration components which will provide the core of the commercial facility, but will then continue to function as permanent, organic Quality Control and R&D centers.**

This phased approach minimizes risk while ensuring efficient capital deployment.

Three Transformative Markets, One Revolutionary Solution

1. Sustainable Aviation Fuel (SAF): Greening the Skies

- **Market Opportunity:** The U.S. SAF Grand Challenge aims for **3 billion gallons annually by 2030** and **35 billion gallons by 2050**.
- **Revenue Potential:** \$14.7 million annually from 5 million gallons of biobutanol converted to SAF.

2. Renewable Fuel Blending: Beyond Ethanol

- **Market Opportunity:** Demand for cleaner fuels driven by regulations and corporate goals.
- **Revenue Potential:** \$15 million annually from blending agents.

3. Green Electricity: Powering Tomorrow

- **Market Opportunity:** AI workloads and hydrogen economies are driving exponential electricity demand.
 - **Revenue Potential:** \$1–\$2 million annually from co-products powering decentralized grids.
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CBR's Competitive Edge

1. **Validated Technology:** Independently verified for **confirmation of functions, products**, cost-efficiency, and scalability.
 2. **Diversified Revenue Streams:** SAF, blending, and electricity markets ensure resilience.
 3. **First-Mover Advantage:** Early market entry positions CBR as a renewable energy leader.
 4. **Potential Government Incentives:** SAF tax credits, grants, and hydrogen subsidies enhance ROI.
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Why CBR Now?

The global renewable energy market is at a tipping point, and biobutanol is leading the charge. CBR offers:

- **Proven Technology:** Scalable and efficient.
 - **Massive Market Potential:** SAF and green electricity demand is soaring.
 - **Immediate Impact:** Early investors secure a position in the renewable energy revolution.
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Join the Energy Revolution

The future isn't just renewable—it's **profitable**. Biobutanol is redefining what's possible in clean energy, and Community BioRefinery is making it a reality. Don't miss the chance to be part of this transformative journey.

Author's Note: This article focuses exclusively on one product from the fermentation-related aspects of the Community BioRefinery's capabilities. Potential investors should know that there is more potential for return via not only additional fermentation-related products, but also the CBR facility's Food/Nutraceutical aspects, which contribute to the continuous sugar stream, enabling the fermentation side of the process to function on a continuous basis.

This article is not a solicitation to invest, but rather, information to garner initial interest for potential partners to take a closer look at Community BioRefineries, LLC. Any person considering making an investment must be Accredited and received a full description of the investment opportunity with its accompanying due diligence material.

For more in-depth information please see our website. [Community BioRefineries](#)