



BDO Zone Ratings

An economic development tool to attract and accelerate new biofuel manufacturing and renewable energy technologies

Jordan Solomon
President & CEO, Ecostrat
Chairman, BDO Zone Initiative



GOVERNOR'S CONFERENCE ON ENERGY & THE ENVIRONMENT



The **BDO Zone Initiative** enables regions to leverage local biomass assets to attract new bio-based manufacturing plants-- and create jobs.

A **BDO Zone rating** is a qualified assessment of biomass feedstock and infrastructure attributes of a region with respect to development potential of new biofuel, renewable chemical, biogas or bioproduct manufacturing plants.



www.bdozone.org

In a nutshell, BDO Zone Ratings...

- ✓ **Pre-vet, and quantify** key regional biomass feedstock and infrastructure “success” characteristics.
- ✓ **Connect BDO Zones** with bio-based project developers and investors around the world
- ✓ **Link BDO Zones with \$1B** of private capital to get new plants built.
- ✓ **Drive new biobased manufacturing to underserved communities– and create jobs!**



BDO Zone Ratings Due Diligence

- BDO Zones undergo rigorous and extensive due diligence using a standardized framework of over 100 transparent and validated risk indicators.

The 3 Pillars of BDO Zone Designations

Feedstock surplus

Data indicating at least a 3x Biomass Availability Multiple of excess sustainable feedstock available to support typical intake of new biofuels, biochemical and biomaterial production plants.

Committed suppliers

Evidence supporting long-term commitment to supply both quantity and quality by local farmers, forestry companies, food waste generators, haulers and municipalities.

Sound infrastructure

The OZ must have suitable transportation, logistic, operating and supporting infrastructure to meet the requirements for new facility construction and operations.

- “A” and “AA” BDO Zone Ratings identify optimal zones in each state for new biobased development.

Recognized, Credible, Transparent, Standards-based Ratings Framework



- BDO Zone Ratings are issued within the framework of the *US Standards for Biomass Supply Chain Risk*.
- 6 years development by US Department of Energy (USDOE)/ Idaho National Labs, Ecostrat, and a 65 member, \$60B capital market ratings review committee.
- >\$6MM funded by USDOE's Bioenergy Technologies Office (BETO).

Download at
www.ecostrat.com/standards



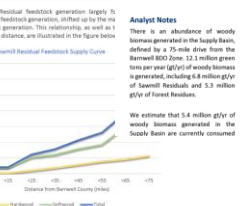
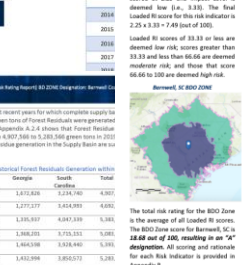
Barnwell County, SC BDO Zone 'A' Rating

- 'A' rated BDO Zone for woody biomass.
- Geographic area: 75 mile radius from City of Barnwell, South Carolina, USA.
- 12.1 million tons per year of biomass generated.
- Strong supply chain attributes; well-developed operating infrastructure for new plant development.
- Ratings upgrade to 600,000 bone dry tons Q3 2022

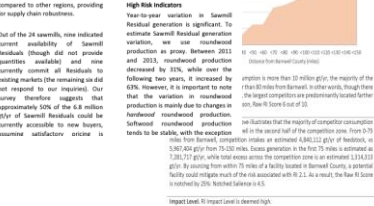
Bioeconomy Development Opportunity Zone Risk Rating



Barnwell County, SC Bioeconomy Development Opportunity Zone Risk Rating Report | BDO ZONE Designation: Barnwell County, SC Date of Issue: Nov-16-2021

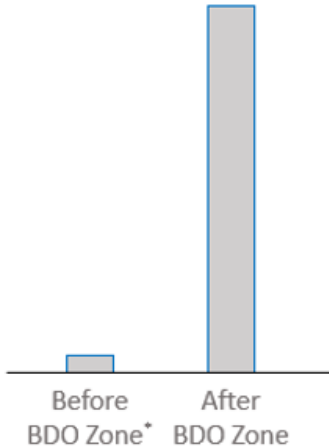


Barnwell County, SC Bioeconomy Development Opportunity Zone Risk Rating Report | BDO ZONE Designation: Barnwell County, SC Date of Issue: Nov-16-2021



Impact of BDO Zone Rating: 10X increase in bioproject dealflow for City of Melville

Potential Bio-development
Opportunities in Melville



In the **11-month** period after issue of the BDO Zone designation, the City of Melville generated a **1000% increase in inquiries and discussions related to wheat straw utilization (versus the past 12 months)** by bio-based project developers, investors, other EDAs, research colleges and municipalities.

Melville's View

- Increased ability to reject investments that don't match up with their sustainability pillars – in part due to **increased deal flow**
- Looking at **growth and potential partnerships** in a way they couldn't previously; business economic development conversations were very limited prior to designation

Goals of Potential Projects

- 1 or more biobased manufacturing plant
- \$250M investment target
- 110 direct jobs
- 150 to 200 indirect jobs
- Long-term tax incentives partnerships possible

"I haven't seen this kind of activity in the seven years I've been here."

Chris Bruce, Director of Community Services, City of Melville

* In year prior to BDO Zone designation

BDO Zone Investment Coalition

April 22, 2021: **\$1 Billion announced** for deployment into bio-based investment in BDO Zones



The BDO Zone Investment Coalition is a group of leading capital markets¹ with a collective **goal of investing \$1 billion in BDO Zones** to build new biofuel, renewable chemical, biogas manufacturing plants.

BSCR Risk Ratings Review Committee Members



See all BDO Zone Investment Coalition members: www.bdozone.org/us/support

See all 65 BSCR RC members: ecostrat.com/standards/participants

¹ Made up 16 members of the BSCR Review Committee

The BDO Zone Summit- August 17, 2021

BD | THE BIOECONOMY DEVELOPMENT
OZ | OPPORTUNITY ZONE INITIATIVE

PROGRAM AGENDA

1:00 OPENING REMARKS

How BDO Zones help communities leverage biomass assets to create jobs. Why BDO Zone Designations drive and unlock bio-investment and get new plants built faster.



Jordan Solomon
President & CEO
Ecostrat
Chairman of the BDO Zone Initiative



Mark Riedy
General Counsel & Co-Founder
Alternative Fuels & Chemicals
Coalition (AFCC)



Wes Jurey
CEO & Founder
Agricultural Technology Innovation
Partnership (ATIP) Foundation

1:10 COMMUNITY PANEL

Real communities speak about opportunities and barriers to attracting biobased investment and deal-flow. Grassroots support for BDO Zone Designations from local communities and EDAs. Moderated by Wes Jurey, ATIP Foundation.



Donna Gambrell
President & CEO
Appalachian Community
Capital



Sumesh Arora
Director of Energy &
Natural Resources Division
Mississippi Development Authority



Greg Norton
President
Golden State National
Resources Corporation



Mike McArthur
Executive Director
Community Renewable
Energy Association



John Lester
General Manager
Clarksville Connected
Utilities

1:40 CAPITAL MARKETS PANEL

Barriers to investing in rural and distressed communities. Why are BDO Zone designations meaningful for capital markets? How much capital is "investment ready" to stand up biobased plants across the country? Moderated by Jordan Solomon, Ecostrat.



Justin Goldstein
Vice President, Investment
Banking Division
Goldman Sachs



David Livingstone
Managing Director
Citigroup



Max Vernier
Head of Bioenergy
Live Oak Bank



Scott Chabina
CEO & Founder
Chabina Energy Partners

2:00 PROJECT PANEL

Why BDO Zone Designations help create efficiencies for project developers. Why they help projects succeed. How they make developers develop more biobased projects faster. Moderated by Mark Riedy, AFCC.



Nick Andrews
CEO & Founder
USA Bioenergy



Chris Whitworth
Project General Manager
Northwest Advanced Biofuels



Seth Ginther
Executive Director
US Industrial Pellet
Association



Patrick Serfass
Executive Director
American Biogas Council

2:20 USDA REMARKS



Dr. Karama Neal
Administrator, Rural Business-
Cooperative Service
USDA Rural Development

View the BDO Zone Summit here:

<https://bdozone.org/the-bdo-zone-summit-2021/>

BDO Ratings supercharge bio-based economic development:

BDO ZoneCONNECT connects BDO Zones with hundreds of developers and investors worldwide

'Bio-Business Development' Webinars

Viewed by >1000 bio-project developers and investors worldwide

Access to TheDigest's >5 million unique online bioeconomy sector readers, 140,000 streaming viewers bio-industry stakeholders and 45,000 daily newsletter subscriptions.

'Rapid Accelerator' Meetings

Private, hosted discussion groups

Private zoom meetings with 50-100 pre-qualified bio-project developers, investors and strategic partner companies actively looking to build new bio-based plants in BDO Zones.

Tuesday June 21, 12-1PM ET

BDOZONECONNECT **BARNWELL COUNTY, SC**

- SUSTAINABLE SURPLUSES OF BIOMASS FEEDSTOCK, SUPPORTIVE OF BIOBASED DEVELOPMENT, INFRASTRUCTURE TO SUPPORT NEW MANUFACTURING
- PART OF OUR SERIES EXPLORING BIOECONOMY DEVELOPMENT OPPORTUNITY ZONES
- NETWORKING THROUGHOUT THE HOUR
- POST-PRESENTATION DISCUSSION



Kay Maxwell
VP, Marketing
Southern Carolina
Alliance



John Fleming
Director of
Development
Southern Carolina
Alliance



Jordan Solomon,
CEO, Ecostrat,
Co-Founder,
BDO Zones

>> [Click here](#) to view Barnwell County, SC BDO ZoneCONNECT <<

BDO Zones: Economic Impact on Kentucky

10-20 potential BDO Zones in Kentucky

681

new clean energy jobs

\$726M

construction cost

\$113M per yr

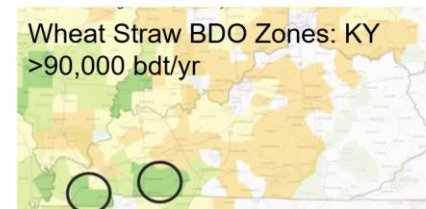
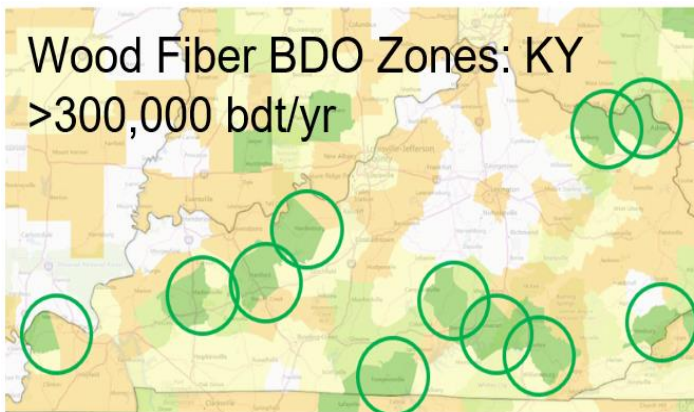
in direct and indirect economic impact



BDO Zones will attract a mix of large, medium and small biofuel, renewable chemical and biogas plants in Kentucky.

Economic impact on the Kentucky region of one single SAF biorefinery¹

- \$426 million from construction
- \$66.7 million each year
- 400 jobs in direct, indirect and induced employment



¹Regional Economic Impacts of Biochemical and Pyrolysis Biofuel Production in the Southeastern US: A Systems Modeling Approach



Want to know more?

Contact:

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Jordan Solomon, Chairman BDO Zone Initiative, jordan.solomon@ecostrat.com