



# The BDO Zone Initiative

Supporting county efforts to attract biomass-based manufacturing and drive clean energy economic development

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





The **BDO Zone Initiative** is a regional risk-rating and certification program that 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](http://www.bdozone.org)

## BDO Zone Ratings Objectives...

- ✓ Use internationally recognized risk metrics to credibly **quantify and signal key biomass feedstock and infrastructure “success” characteristics** valued by biobased developers and investors around the world.
- ✓ **Connect** ‘A’ and ‘AA’ rated communities with bio-based project developers looking to build new plants in BDO Zones.
- ✓ **Help get biomass-based manufacturing plants built** in the places they are most likely to succeed.



# 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



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

# Recognized, Credible, Transparent, Standards-based Ratings Framework



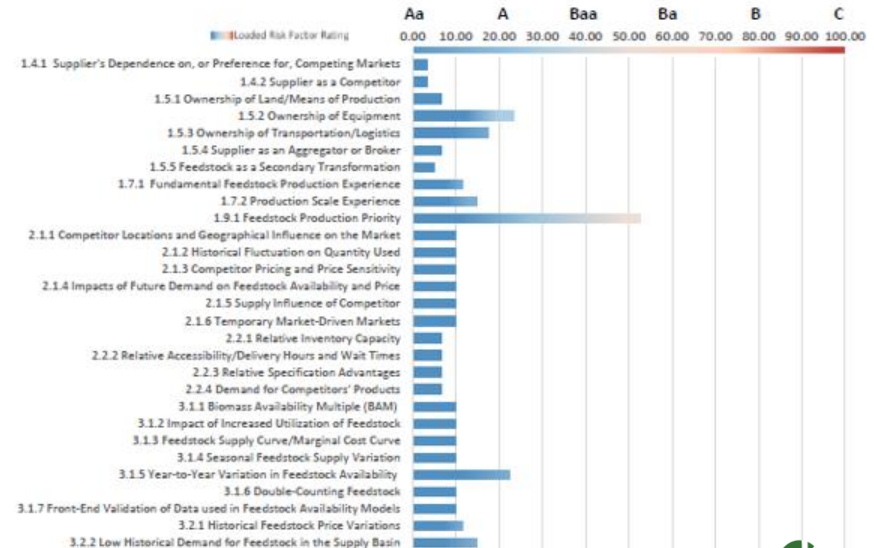
[www.ecostrat.com/standards](http://www.ecostrat.com/standards)

- BDO Zone Ratings are issued within the framework of the Canadian national *Standards for Biomass Supply Chain Risk*.
- Accredited National Standard in March 2021 by CSA and SCC (CSA W209:21). ANSI accreditation planned for 2023.
- 6 years of development led by Ecostrat, 150-member industry stakeholder group, and a 65 member, \$60B capital market ratings review committee.
- >\$6MM funded by federal governments. Natural Resources Canada (NRCan), Standards Council of Canada (SCC), US Department of Energy (USDOE)/ Bioenergy Technologies Office (BETO).

# Risk Ratings Protocols and Scoring Metrics: Probability of Risk Occurrence x Impact



Figure 2 - Risk Indicators (sorted numerically)



# What does a BDO Zone rating look like?

## The City of Melville BDO Zone



'A' rating for 300,000 tons of wheat straw

Bioeconomy Development Zone Risk Rating Report | BD ZONE Designation: The City of Melville, SK  
Date of Issue: 11-26-2020

BD ZONE Rating: A

### Bioeconomy Development Zone Risk Rating



**Bioeconomy Development Zone Risk Rating**

The City of Melville, SK Bioeconomy Development Zone is rated "A". Long-term outlook on price and quantity for wheat straw is deemed stable. Key scale-up risks are likely addressable with reasonable mitigation measures.

**Rating Parameters**  
Quantity: 200,000-300,000 ODMT

**BD Zone Risk Rating**

Each BD Zone Risk Indicator (RI) increased in this report. First, each BD Zone Risk Indicator is given a Base Risk Score based on the current understanding of the supply chain and the secondary drivers within a Base Risk Score are noted below:

- 1 (Moderate-Avg) or 2 (High)

Next, each Risk Indicator is classified as "High", "Moderate", or "Low" based on the degree to which the secondary drivers are deemed to be addressable, and whether there is a reasonable expectation that mitigation measures will be implemented in a timely manner. These BD Zone Risk Indicators are the subset of RISK Risk Indicators applicable to generating feedstock risk within a BD Zone.

Feedstock quantity is measured in overall metric tonnes (ODMT). Feedstock Type is measured in Canadian dollars, FOB port cost, assuming the plant is located centrally in the BD Zone. Minimum transport distance is calculated assuming the maximum quantity in this BD Zone (300,000 ODMT). Delivered feedstock cost (per gigajoule) with base costs are reported in the lower end of the BD Zone price range.

**Scope of Rating Methodology**  
The BD Zone rating is based on an aggregation of the scores assigned to:

- 1.1.1 Feedstock Quantity
- 1.1.2 Feedstock Type
- 1.1.3 Feedstock Price
- 1.1.4 Feedstock Quality
- 1.1.5 Feedstock Availability
- 1.1.6 Feedstock Reliability
- 1.1.7 Feedstock Sustainability
- 1.1.8 Feedstock Environmental Impact
- 1.1.9 Feedstock Social Impact
- 1.1.10 Feedstock Regulatory Compliance
- 1.1.11 Feedstock Market Demand
- 1.1.12 Feedstock Logistics
- 1.1.13 Feedstock Infrastructure
- 1.1.14 Feedstock Technology
- 1.1.15 Feedstock Innovation
- 1.1.16 Feedstock Resilience
- 1.1.17 Feedstock Flexibility
- 1.1.18 Feedstock Scalability
- 1.1.19 Feedstock Adaptability
- 1.1.20 Feedstock Future Potential

The City of Melville, SK Bioeconomy Development Zone is rated "A". Long-term outlook on price and quantity for wheat straw is deemed stable. Key scale-up risks are likely addressable with reasonable mitigation measures.

### Rating Parameters

Quantity  
200,000-300,000 ODMT

Feedstock Form  
Square/round bales

Assessment (feedstock) (Risk Rating Report) | BD ZONE Designation: The City of Melville, SK  
Date of Issue: 11-26-2020



Assessment (feedstock) (Risk Rating Report) | BD ZONE Designation: The City of Melville, SK  
Date of Issue: 11-26-2020

**BD Zone Risk Rating: A**

| Item                     | Score |
|--------------------------|-------|
| 1.1.1 Feedstock Quantity | 2     |
| 1.1.2 Feedstock Type     | 3.33  |
| 1.1.3 Feedstock Price    | 6.66  |



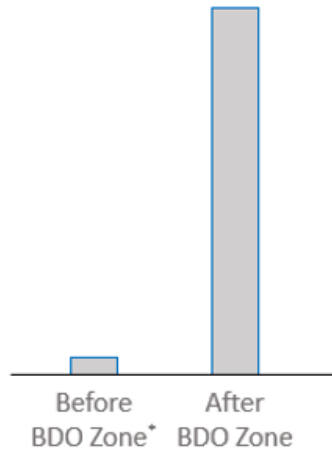
Assessment (feedstock) (Risk Rating Report) | BD ZONE Designation: The City of Melville, SK  
Date of Issue: 11-26-2020

**BD Zone Risk Rating: A**

| Item                     | Score |
|--------------------------|-------|
| 1.1.1 Feedstock Quantity | 2     |
| 1.1.2 Feedstock Type     | 3.33  |
| 1.1.3 Feedstock Price    | 6.66  |

# 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

# How BDO Zones generate deal-flow



## Publication and Press

- All ratings published and downloadable on [bdozone.org](http://bdozone.org)
- Press release to over 50 bio-based organizations and sector publications worldwide.

|                               |                               |  |
|-------------------------------|-------------------------------|--|
| TheDigest                     | World Biogas Association      | Biorenewable Deployment Consortium (BDC) |
| Canadian Biomass Magazine     | Wood Bioenergy Magazine       | Bioenergy Insight                        |
| Biofuels International Online | Biodiesel Magazine            | Waste Today                              |
| American Biogas Council       | Clean Energy Business Network | Biomass Magazine                         |
| Canadian Biogas Association   | Renewable Energy World        | Renewable Energy Magazine                |
| BioCycle Connect              | Biobased Diesel Daily         | World Bioenergy Association              |
| Biomass Energy Network        | Bioenergy International       | Biogas World                             |
| Biomass International         | Advanced Biofuels USA         | Pellet Mill Magazine                     |

*For complete list of publications contact [bdozone.org](http://bdozone.org)*

- Inbound inquiries directed to BDO Zone Local Development Leader (LDL)

# Invest in Canada drives deal-flow to BDO Zones

- **Invest In Canada** is the federal government's global investment attraction and promotion agency. It is the global investor's primary point of contact to unlock business opportunities and facilitate job growth and expansion in Canada.
- Invest In Canada has endorsed the BDO Zone Initiative as a means to drive bio-based investment into Canada.
- *Invest In Canada promotes BDO Zone Ratings through over 160 offices around the world.*



**MAKE MONEY.  
REDUCE RISK.  
MADE EASY.**

**WE ARE YOUR PRIMARY CONTACT**

Invest in Canada works directly with global investors to unlock business opportunities and facilitate expansion in Canada. We bring industry, community and government partners together to offer seamless services that make it easy for you to grow your operations in Canada.

[FIND OUT HOW >](#)



# 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.

## DIGESTCONNECT

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  
SouthernCarolina  
Alliance



John Fleming  
Director of  
Development  
SouthernCarolina  
Alliance



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

## DIGESTCONNECT

Tuesday April 5, 12-1PM ET

### BDOZONECONNECT SILOAM SPRINGS, ARKANSAS MELVILLE, SASKATCHEWAN

- 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



RON MCCULLOUGH  
CITY ADMINISTRATOR  
MELVILLE,  
SASKATCHEWAN



PHILLIP PATTERSON  
CITY ADMINISTRATOR  
SILOAM SPRINGS,  
ARKANSAS



JORDAN SOLOMON,  
CEO, ECOSTRAT,  
CO-FOUNDER,  
BDO ZONES

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

# The BDO Zone Investment Coalition

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



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



See all BDO Zone Investment Coalition members: [www.bdozone.org/us/support](http://www.bdozone.org/us/support)

See all 65 BSCR RC members: [ecostat.com/standards/participants](http://ecostat.com/standards/participants)

<sup>1</sup> Made up 15 members of the BSCR Review Committee

# The BDO Zone Summit- August 17, 2021

## 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 Zone Ratings: The Bottom Line...

### BDO Zone Ratings:

- ✓ **Enable** communities to powerfully signal key economic development “success” characteristics valued by biobased developers and investors.
- ✓ **Connect** ‘A’ and ‘AA’ rated communities “one-on-one” with hundreds of project developers around the world.
- ✓ **Help** get biomass-based manufacturing plants built faster and create jobs.

**BD**  
**OZ**  
INITIATIVE

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