



BIOECONOMY INVESTMENT FORUM

PRESENTATION



Chris Lane
President & CEO
Economic Development Regina

ECONOMIC DEVELOPMENT
REGINA



- I am so happy to be here today. To have all of you in a room together. This has been my vision. To bring everyone I have been talking too together. So we can connect and learn.
- The reality is, that were going to get there faster together. Working to achieve the same goal. And telling the same story about Regina.

OUR WORK AT EDR


Creating opportunities




Data & Analytics
Economics, Policy,
Research, Insights



Expertise
Sector, Incentives,
Investment, Partners



Inbound
Hosting, Site Visits,
Networking, Data



Outbound
Bids, Exploration, Lead
Generation



OUR WORK AT EDR

Building the brand



Data & Analysis
Economics, Policy,
Analytics



Building Regina's
brand

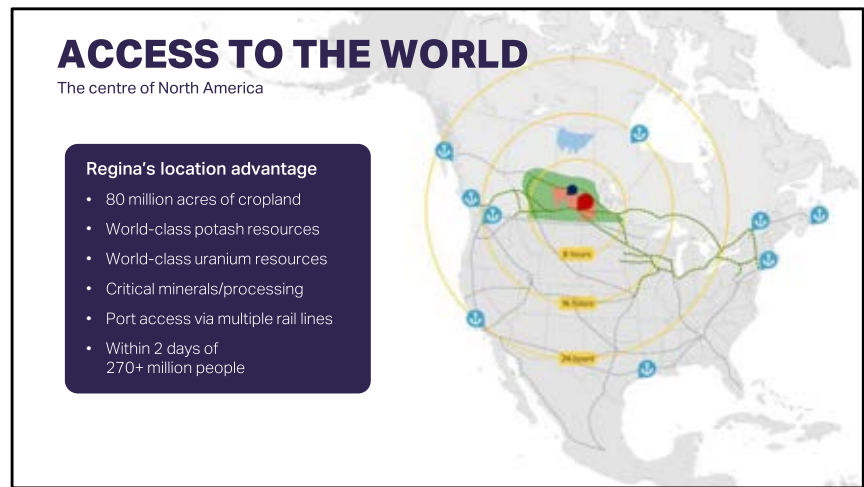


Building
EDR's brand



Growing
Partnerships





- We refer to Regina as the heartbeat of Canada's new Prairie economy, and here's why:
 - [click] Located in the centre of North America and surrounded by more than 80 million acres of some of the best cropland earth –we have a long history of sustainably producing the kinds of high-quality, abundant crops the world needs – and unparalleled access to feedstocks for processing and renewable energy production.
 - [click] Our home province of Saskatchewan is home to one of the world's richest deposits of potash, a critical ingredient for fertilizer, enhancing and enabling the kind of sustainable crop production our growing world needs. It's also worth noting that Saskatchewan potash is the most sustainably produced anywhere in the world, and we're incredibly proud of our producers for that.
 - [click] We're also home to the highest quality uranium deposits in the world – a vital ingredient in the world's zero-emissions energy mix
 - [click] And speaking of future energy needs, the city of Saskatoon, just two hours up the road, is an emerging centre for critical minerals processing through the Saskatchewan Research Council (SRC). With 23 of the 31 minerals on the Canadian Critical Minerals list, our province is also an established hub in rare earth mineral extraction including critical minerals like lithium, potash, uranium and helium.
 - Our province is home to.
 - [click] And while we're situated in the centre of the continent, Regina has access to tidewater through an extensive rail system across North America.
 - [click] And we're within 24 hours drive time of more than 270 million customers in North America.



- **Agriculture & Food**
 - Saskatchewan is the world’s largest exporter of canola, peas, lentils, durum wheat, flaxseed, oats and mustard seed.
 - In 2022, Saskatchewan exported \$18.4BN in agri-food, up from \$17.5BN in 2021.

- **Energy: Alternative, Clean and Renewable**
 - Regina is emerging as a centre for alternative, clean and renewable fuels from agricultural waste and residue and is capitalizing on sustainable innovation and energy delivery.
 - Research and innovation – Regina is home to the Clean Energy Technologies Research Institute (CETRI), Greenhouse Gas Technology Centre and Petroleum Research Technology Centre at the University of Regina.
 - Leader in carbon capture research through the International Carbon Capture Knowledge Centre at the University of Regina.
 - Regina’s location in the centre of 80 million crop acres has afforded producers and processors the ability to identify new and innovative uses for biomass products that were normally seen as agricultural waste.

- **Manufacturing**
 - Home to over 200 manufacturing businesses serving 36 sectors, Regina is a global hub for manufacturing and innovation.
 - Specializing in short-line manufacturing of agricultural equipment for precision dryland farming.
 - A world-class steel mill provides high-quality steel supply to local industry and beyond.

- **Location Advantage**
 - Regina is surrounded by 80 million acres of cropland, creating unparalleled access to agricultural commodities.
 - Superior access to markets
 - Two intermodal transport facilities (including a self-governing inland port) provide access to North American and global markets via interconnected rail, air and road systems.

A HOME FOR AG & FOOD INNOVATION

Regina's vision



The Greater Regina Area will be the ag and food hub for Canada and the world. We will start, grow, scale and attract companies in agribusiness, drive agtech innovation through an integrated and sustainable supply chain.



- Regina's Ag and Food Innovation strategy outlines our region's natural strengths and identifies key actions to create a new path forward for businesses and residents alike, strengthening the GRA's position as a global ag and food powerhouse.
- The strategy was developed by a Steering Committee comprised of key leaders in Regina's agriculture and food sector, and provides a framework to seize this generational opportunity. It's the result of significant consultation with stakeholders in the GRA and across southern Saskatchewan. It sets measurable objectives that ensure continued progress toward our bold vision.



- This is where Regina’s biomass cluster really takes shape. So many of the pieces we need are already here and well established. The next step is to show the world.
 - That’s why we’ve been working closely with a global organization called Ecostrat to have the GRA recognized as a Bioeconomy Development Opportunity zone designation – or BDO Zone for short.
 - [\(BDO\) Zone](#) Ratings certify ‘regional readiness’ for bio-manufacturing, create global connections and ignite an influx of clean energy opportunities, BDO Zone ratings are force-multipliers for attracting new manufacturing plants that produce advanced biofuels, renewable chemicals, biogas, and biobased products and decrease GHGs in a meaningful ways.
 - And as I’ve already mentioned, we’ve got the assets in place that Ecostrat looks for when they complete their ratings:
- **Feedstock surplus:** Data indicating at least 50,000 tonnes per year of excess sustainable feedstock available to support typical intake of new biofuels, biochemical and biomaterial manufacturing plants.
 - Regina has 15 million within 200 km
- **Supply chain strength:** Evidence supporting supply chain strength and resilience including on the ground feedback from local forestry companies, farmers, food waste generators, haulers and municipalities.
 - Long-established ag supply chain that has supported Regina’s economy for as long as the city has existed
- **Sound infrastructure:** Suitable transportation, logistic, operating and supporting infrastructure to meet the requirements for new facility operations.
 - GTH, Chuka Creek, Bypass, etc.



- At the same time, we're looking for opportunities gather support to accelerate the growth of the cluster.
- One of those opportunities is the Clean Fuels Fund, which is helping establish biomass hubs to provide fuel producers with a reliable and timely supply of raw materials or feedstock in close proximity to production facilities. And the benefits are huge.
 - Jobs: Creating new clean fuels jobs across Canada in construction and operation
 - Economic Opportunities: Opening new markets for conventional energy, waste, and cleantech companies, and for agriculture
 - Environmental benefits: Helping reduce emissions



- With all that said, I'm thrilled to share some fantastic news about Regina's next big leap into the future of biobased development.
 - I want to announce the upcoming designation of Regina as an AA-rated Bioeconomy Development Opportunity Zone for Canola oil and meal. We believe our BDO Zone rating will be a game-changer for our region and a huge step forward in building a sustainable economy right here at home.
 - So, what's so important about the Regina BDO Zone? Well, working with Ecostrat, we've achieved a rare AA rating based on a comprehensive evaluation of biomass supply chains for Canola and infrastructure strengths and opportunities. That's not just a score; it's a testament to our "regional readiness for biomanufacturing".
 - This rating will support the capital raises of the projects we are working with now to use local Canola Oil and Meal to produce low carbon biofuels, and renewable chemicals.
 - And because BDO Zone ratings are recognized by project developers all over the world as some of the best places to site new bio-based projects, this rating will act as a bull-eye to attract more bio-based projects to Regina. A "Double A" BDO Zone Rating for Regina means we're not just ready; we're ideally positioned to jump into biobased manufacturing full throttle. This isn't just growth; it's smart growth—growth that respects our environment and builds our economy in a way that lasts.
 - We look forward to the publication of the Regina BDO Zone Rating this summer and to showing what Regina can do when we lead the way in the bioeconomy. Here's to a sustainable, prosperous future that starts right here, right now.



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ECONOMIC DEVELOPMENT
REGINA
Bioeconomy Investment Forum

KEYNOTE



Kristjan Hebert
President & CEO
Hebert Group



Robert Andjelic
Founder & CEO
Andjelic Land Inc.



Moderated by: Chris Lane, President & CEO, EDR

BIOECONOMY INVESTMENT FORUM
PANEL DISCUSSION



Murad Al-Katib
President & CEO
AGT Food and Ingredients



Patrick Bergemann
Associate Vice-President
Energy Roadmap
Federated Co-operatives Limited



Chad Jedlic
Director, Land, Real Estate &
Economic Development
City of Regina



Moderated by: Robbie McLellan, Partner, MLT Aikins

BIOECONOMY INVESTMENT FORUM

PRESENTATION



Joshua Thomas

Community Energy Planner & Project Coordinator
First Nations Power Authority

STRATEGIC
DEVELOPMENT
REGINA

BIOECONOMY INVESTMENT FORUM
PANEL DISCUSSION



Jordan McFarlen
Director
Conexus Venture Capital



Kyle Adams
Director of Investment
and Commercialization
Ag-West Bio



Moderated by: Jordan Gaw, Regional Director, Invest in Canada

BIOECONOMY INVESTMENT FORUM

PRESENTATION



Megan Bradshaw

Manager, Energy, Environment & Sustainability
Economic Development Regina





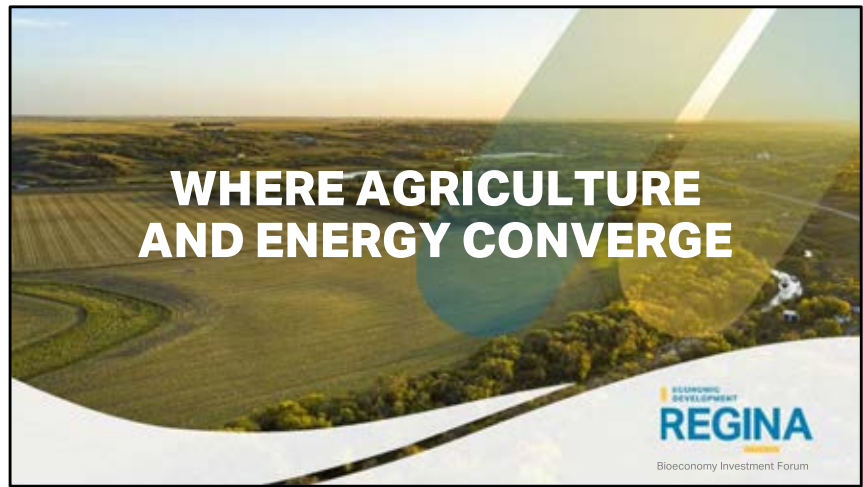
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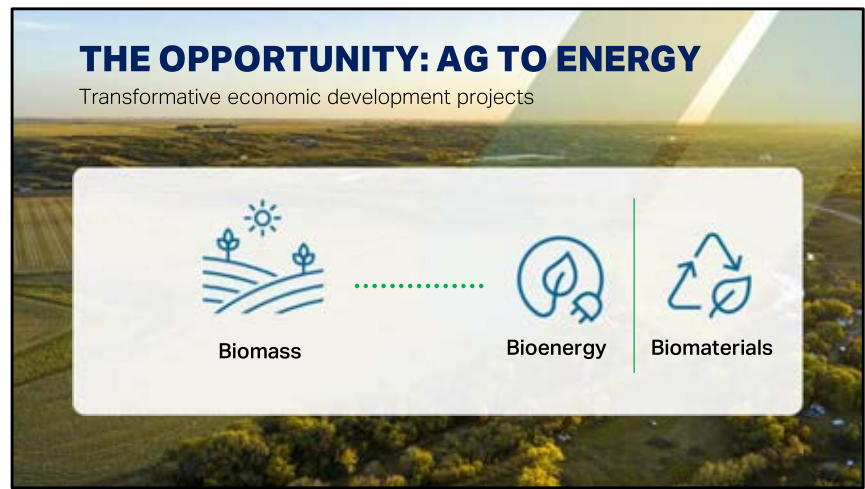
- When I first built and proposed the role of Manager of Energy, Environment, and Sustainability I considered a lot of strengths Regina had.
- I knew that Saskatchewan had always been a powerhouse in terms of traditional energy. I thought of the community that has the most hours of sunlight and the capacity we hold to generate solar power.
- I thought of the Uranium production in Saskatchewan and the pivotal role it plays in Nuclear power. I considered the reliable and economical Natural Gas resource our province has, and the role it plays in Hydrogen production.
- And I knew A LOT about how damn windy it is all the time, and how wind power generation is a leader in clean energy projects.
- What I failed to consider, is probably the biggest opportunity of all. And how we will continue to lead this country in the energy industry.



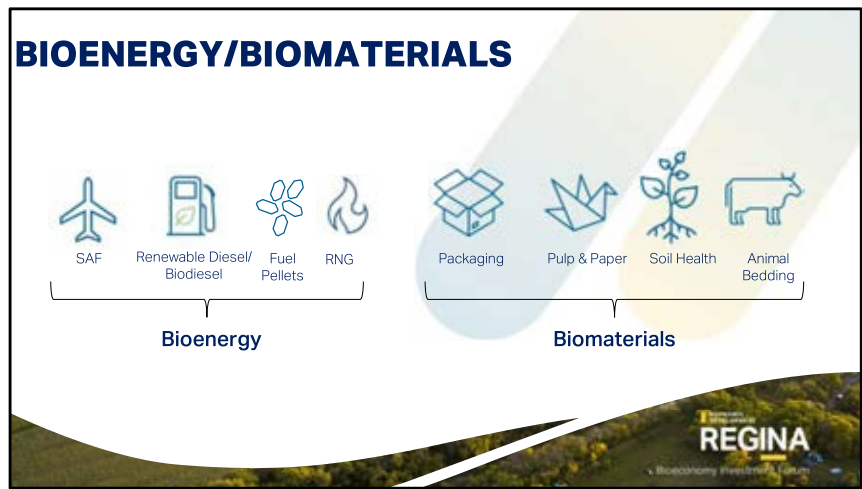
- OK, were still going to need the roads part. But did you catch Mr. Fusion? The biomaterials and leftover beer he selected from the garbage can? Even Mr. Spielberg himself knew about this opportunity. It isn't a new idea.
 - The alcohol you drink (i.e., ethanol) was originally being used in 1826 to power engines. In the 1940s, the first ethanol plant was built, created through the fermentation of corn.
 - Most people know you can fuel a diesel engine with vegetable oil. And since the 1990s some Canadians pour recycled cooking oil supplementing the diesel already in the tank. In fact, German-French inventor Rudolf Diesel originally designed his engine in the 1890s to run on peanut oil before that fuel became supplanted by cheaper petroleum.
 - So the idea may not be novel, but technology has advanced enough to make it more economical, more distributable, and more accessible.
 - But transportation fuels are just one part of the story.



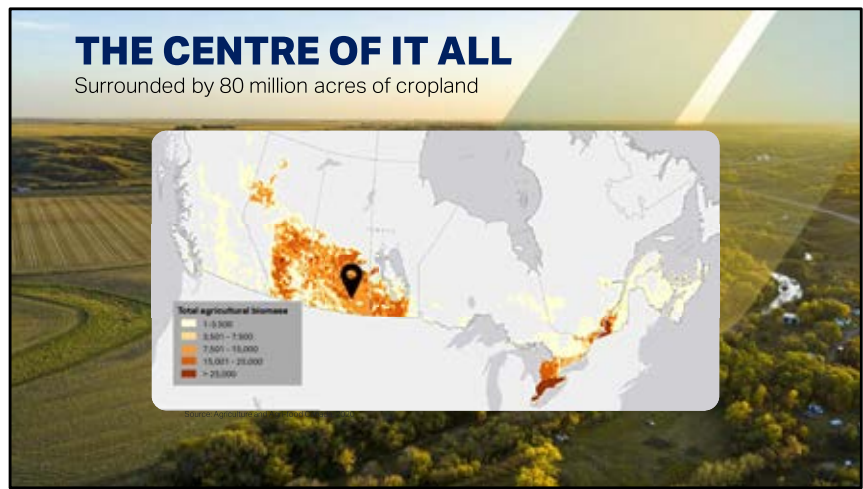
- By now you have heard the term Bio Economy and may or may not be familiar with what exactly it entails.
 - To easily explain it, The bioeconomy comprises those parts of the economy that use renewable biological resources from land and sea – such as crops, forests, fish, animals and micro-organisms – to produce food, health, materials, products, textiles and energy.
 - The most readily available and abundant resource in Saskatchewan and the Regina region has – Agriculture materials. Either in its primary form, or waste and residue.
- Lets keep going. Everyone still with me? Or did I lose you at the Back to the Future reference? That's ok.



- Thanks to new technology – and some not so new ideas. - there are two sectors that essentially make up what is produced using biomass. They are Bioenergy and biomaterials.



- Both of these categories utilize renewable organic material from plants, but also used construction wood and wood waste, food waste, vegetable oils and flax straw. In short, any cellulose-based material is biomass and can be used to produce bioenergy and biomaterials.
- Bioenergy: Renewable fuels (renewable diesel, biodiesel, SAF, burnable pellets, Renewable natural gas)
- Most common is ethanol – a biofuel produced by fermenting plant materials, primarily corn, sugarcane, or cellulosic feedstocks.
- Biomaterials: Bioplastic, compostable packaging, pulp and paper, biochar (charcoal – soil health, veterinary, petcare), animal bedding (flax)



- So lets consider the opportunity Regina has in renewable resources, like agriculture. With our strong foundation in traditional energy, we are uniquely situated to develop, support and grow a robust energy mix that can and will have a major, positive impact on the future Green Prairie Economy.
- With a rapidly growing canola industry is creating major opportunities in food oil, renewable fuel, livestock feed, and plant protein. This is truly one of the world’s principal agriculture opportunities, and Regina has seen massive investment in crushing and renewable fuel manufacturing.
- Agriculture already plays an important role in energy, and this role will only grow in places like Regina that feed and fuel the world.
- Regina is ideally located for a biomass hub
 - We’re located at the centre of more than 80 million acres of cropland across the 3 prairie provinces
 - Closer to home, more than 15 million tonnes of agricultural biomass is produced within 200km of the GRA.
 - Regina’s biomass play already encompasses major crops including canola, wheat, and flax, which are ubiquitous in our region.
 - Further, Saskatchewan crops are among the most sustainably produced on earth.





- In 2022, Canada produced 1.8BN litres of bioethanol valued at CDN\$1.44BN ([Source](#)) – a vital component of Canada’s renewable fuel supply chain.
- Perhaps even more compelling is a recent forecast that the global biofuel market will grow to more than \$390 billion by 2030. If you’re doing the math, that’s just six years away – and there is a limited number of producers who have the ability to meet that demand. With our strong heritage and agriculture (and 80 million acres of cropland around us) Regina has an opportunity to carve out a solid piece of this market.

A CRITICAL MASS OF KEY PROJECTS

Under Construction

- Cargill

Expanding Operations

- Prairie Clean Energy

Announced

- FCL/AGT
- Red Leaf
- Viterra





- The market isn't waiting on Regina to meet its needs
- Jurisdictions all around us are joining in a big way
- In June of this year, in a first for Canada, Portage La Prairie announced a new sustainable aviation fuel facility

BUILDING THE VALUE PROPOSITION

- Clean Fuel Fund
- BDO Zone rating
- Biomass market analysis



REGINA
A Sustainable Future

- Funding and Grants
- There are many, increasing often, sources of funding and grants for clean energy.
- For example, the Clean Fuels Fund (CFF), reaffirmed in the 2021 budget, is \$1.5BN in investment over five years to de-risk capital investment required to build new or expand existing clean fuel production (including facility conversions).
- Support also covers feasibility and front-end engineering and design (FEED) studies, and the establishment of biomass supply chains to improve logistics for the collection, supply, and distribution of biomass materials (e.g., forest residues, municipal solid waste, and agriculture crop residues) as a feedstock in clean fuel production.
- Further resources are available to address gaps and misalignment in codes, standards and regulations related to the production, distribution and end-use of clean fuels.

WHAT COMES NEXT?

The GRA's Biomass Cluster

- Build partnerships
- Pursue active leads
- Get organized
- Tell the story




- So what's next? We have a good sense of the opportunity – and we need to move on it.
- We're not behind in the game, but we understand the sense of urgency. This is a massive opportunity for Regina businesses and for producers in Saskatchewan and across Western Canada. [click]
- Our Next Steps to the GRA's Biomass Energy Cluster
 - Conduct Research: We've already started, and that work will continue, including contracting Professor out of UBC that specializes in Biomass Supply chains.
 - Build Partnerships
 - First Nations Power Authority, YQR Airport Authority, UofR, CETRI, PTRC, City of Regina, Ministry of Energy and Resources, Ministry of Agriculture, Ministry of Trade and Export Development, others
 - Tell the story: Lobbyists for our Committee: [Advancing Agriculture](#), Government of Saskatchewan, others
 - Gather support: large funding application alongside key partners, with EDR as lead.




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REGINA
Bioeconomy Investment Forum

BIOECONOMY INVESTMENT FORUM

PRESENTATION



Arla Cameron

Director of Community Economic Development
Prairies Economic Development Canada



BIOECONOMY INVESTMENT FORUM
PANEL DISCUSSION



Mark Cooper
President & CEO
Prairie Clean Energy



Kris Heshka
Director, Biofibre Strategy
& Innovation
Red Leaf Pulp



Jamie Bakos
President & CEO
Titan Clean Energy



Moderated by: Thomas Benjoe, Partner, OneHoop

BIOECONOMY INVESTMENT FORUM
PANEL DISCUSSION



David Schick

VP Western Canada, Innovation
and Regulatory Affairs
Canadian Fuels Association



Kevin Chung

Director, Innovation
Investments & Programs
Innovation Saskatchewan



Ron Kehrig

Deputy Director,
Investment Relations
Ministry of Trade and Export Development



Moderated by: Dean Clark, Chairman & CEO, Greenwave Innovations Inc.

