

Renewable Fuel Tax Credits:

What are they and why should you care?

Joel Reddick



Defining the Terms

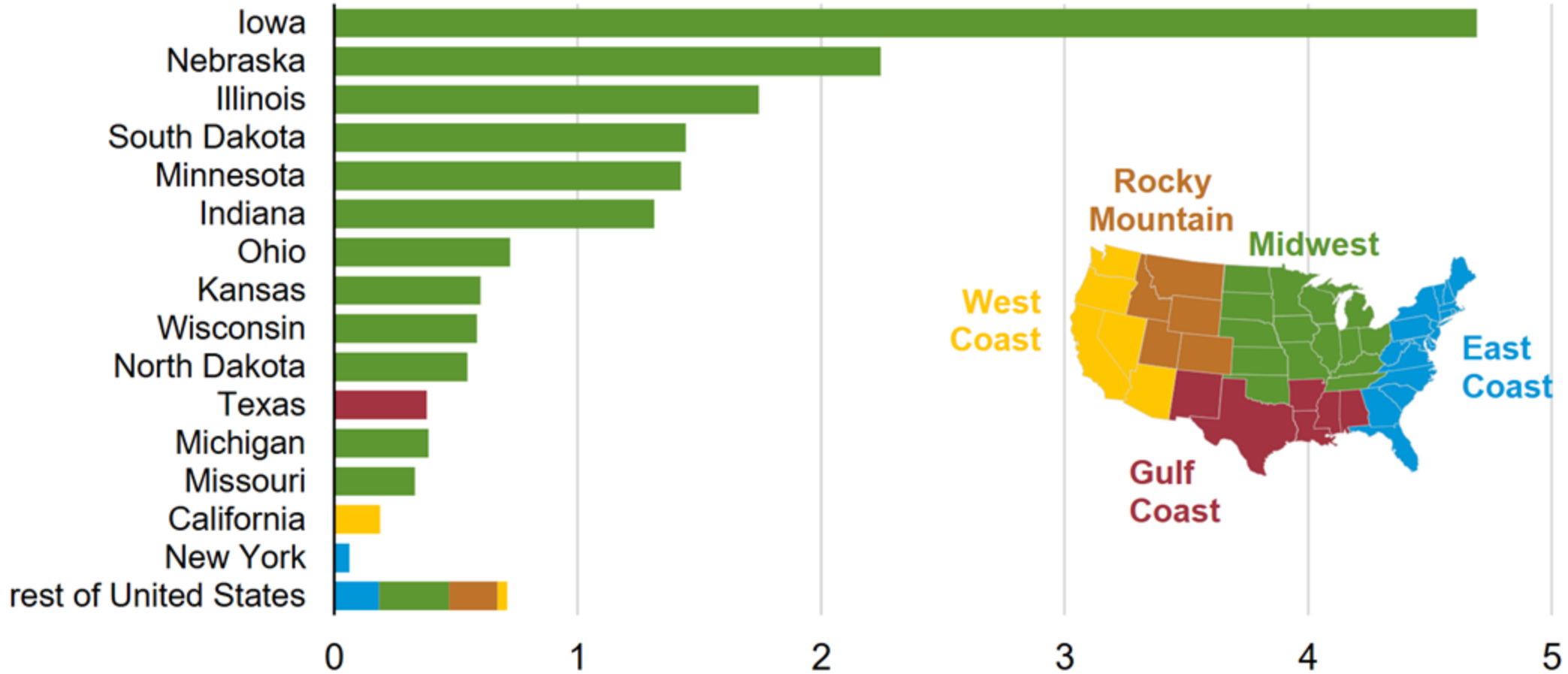
- Tax credit: money given to you by subtracting from the taxes you owe
- Renewable Energy: Unlimited quantity available i.e. Solar, Wind, Geothermal, Hydro
 - Can also come from plant based sources such as corn, (ethanol), Oil seeds (Bio-Diesel, SAF), or plant material (methane digesters)



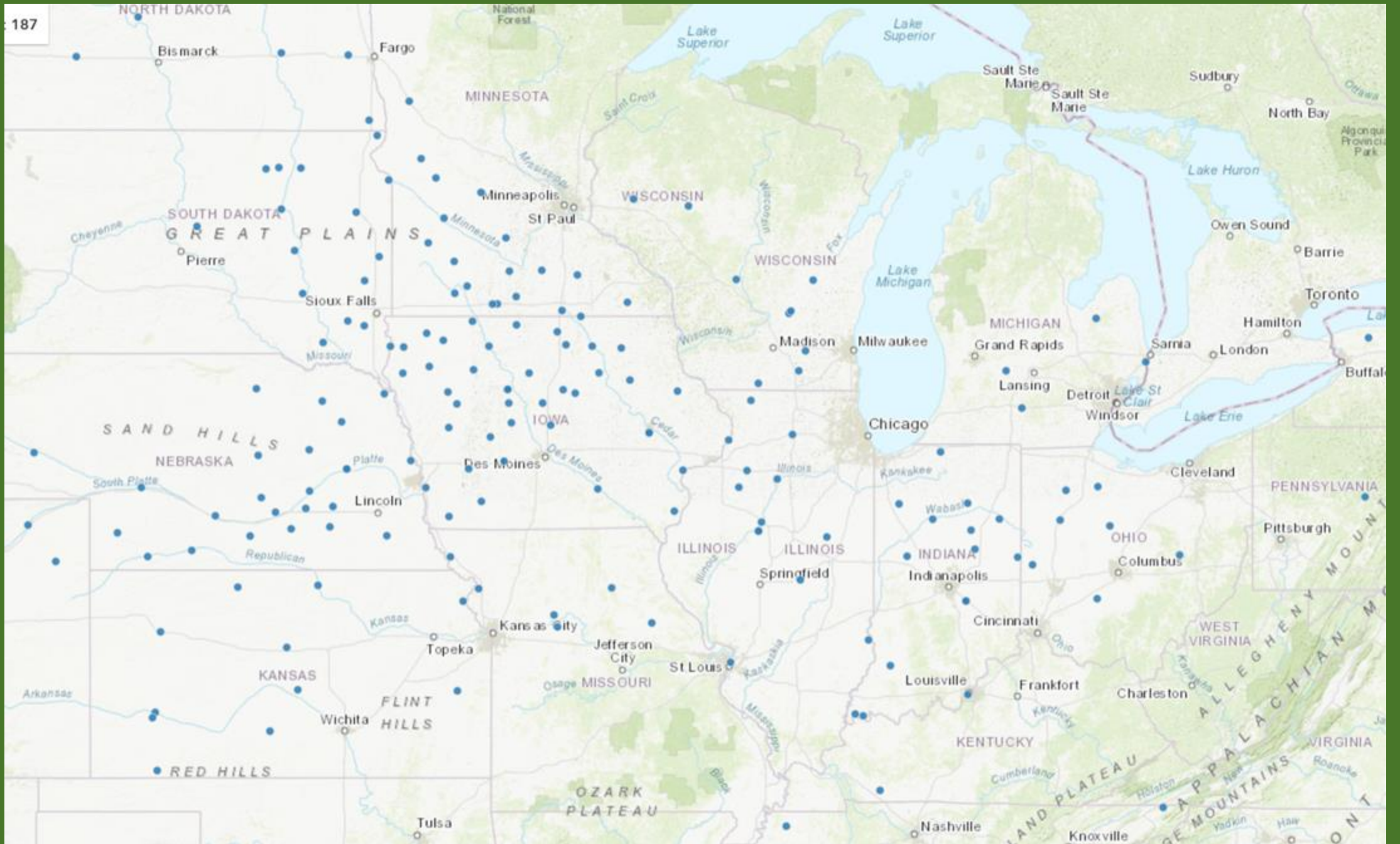
How can agriculture can benefit?

U.S. fuel ethanol production capacity (as of Jan 1, 2022)

billion gallons per year



Data source: U.S. Energy Information Administration, [2022 Fuel Ethanol Production Capacity](#)



Players in the (RF/Carbon) Game

Bunge/Chevron

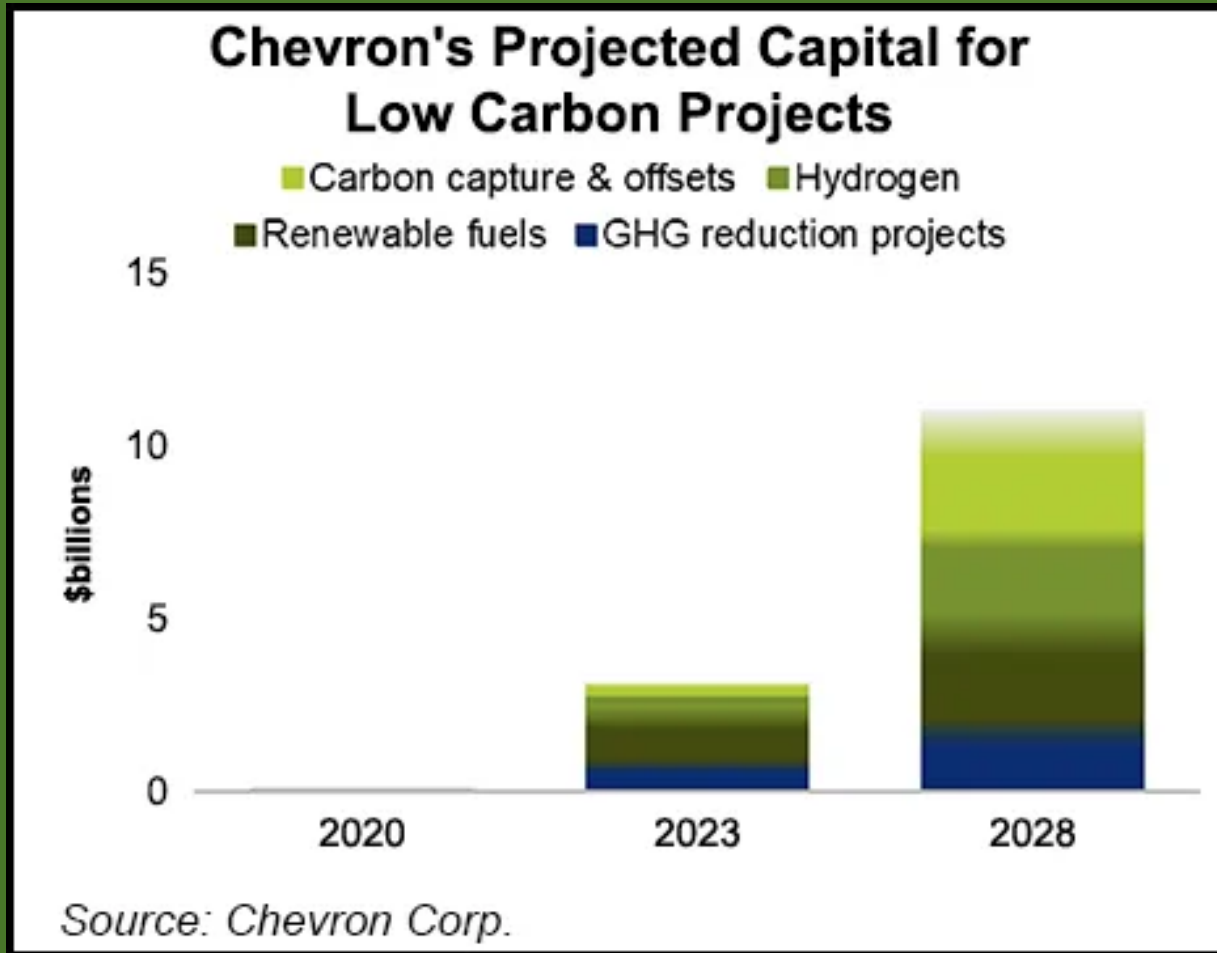
ADM

Continuum Ag

Bayer

And more...

How can agriculture can benefit?



- Unprecedented growth in collaboration between big oil and big Ag



Chevron-Bunge are preparing for exponential growth in new biofuel markets

Commodities

American farmers' next hot commodity is canola for biofuels

By Kim Chipman

July 22, 2024 at 6:00AM EDT



Canola plants at Turner Farms in Union City, Tennessee, on April 24, 2024. (Ariel Cobbert/Photographer: Ariel Cobbert/Bloo)





The course and watershed of the **Mississippi River**
The Father of Waters

200 Miles
400 Km

re:generations™

Built to support farm legacies
and consumer demand.



Indiana Incentives



Enroll Now

Follow these steps:

- 1 Understand your program choices and the deadlines for each step.


COVER CROP

Enroll the maximum amount you are considering planting.

Payer	Compensation	Requirements
USDA - Climate-Smart Commodities ADM/USDA/ Partners Payment	\$25/acre (new in 2023-2024) \$15/acre (new in 2018-2022)	Must provide FSA documents and FSA subsidiary print and will be shared with NRCS/USDA. Cannot be paid for cover crop on the same acres by federally funded programs like EQIP/CSP/RCP. Must have wheat, corn, or soybeans in rotation.
Funded by ADM and Partners	\$10/acre	Plant a cover crop no later than NRCS accepted date. Previous cover crop practice allowed on field. Can be in other federally funded program. Must have wheat, corn, or soybeans in rotation.

ISCC EMISSIONS SCORING

Payer	Compensation	Requirements
Funded by ADM and Partners	\$0.02-\$0.08/bu corn (Attica, IN only) \$0.05-\$0.07/bu soybeans delivered (see chart below)	<p>Establish a Carbon Intensity score for your operation and earn a 2 cent premium on corn and 5 cent premium on soybeans. For operations below the local benchmark for GHG emissions, earn up to a 7 cent premium on soybeans and an 8 cent premium on corn. For soybeans, must deliver to a river terminal or have high oleic in rotation.</p> <p>Farmer must complete and sign the ISCC self-declaration questions during enrollment. Premium paid bi-annually on all bushels delivered to approved locations from Sept. 1, 2024-Aug. 31, 2025.</p> <p>A small subset of farmers will be selected for an on-site interview and compensated \$1,000.</p> <p>No fields enrolled in ADM re:renewations can be enrolled in any other privately funded carbon or sustainability incentive.</p>



View Approved ADM Locations

	Corn			Soybeans	
Lbs CO2e/Bushel	More than 18	18 or lower	14 or lower	More than 20	20 or lower
Premium	\$0.02/bu	\$0.05/bu	\$0.08/bu	\$0.05/bu	\$0.07/bu

Biofuel as a Low Carbon Solution

Well-to-Wheels Greenhouse Gas Emissions (gCO₂e/MJ) of ethanol & gasoline



Gasoline

53.3

Ethanol

45Z Tax Credits Begin at CI <50

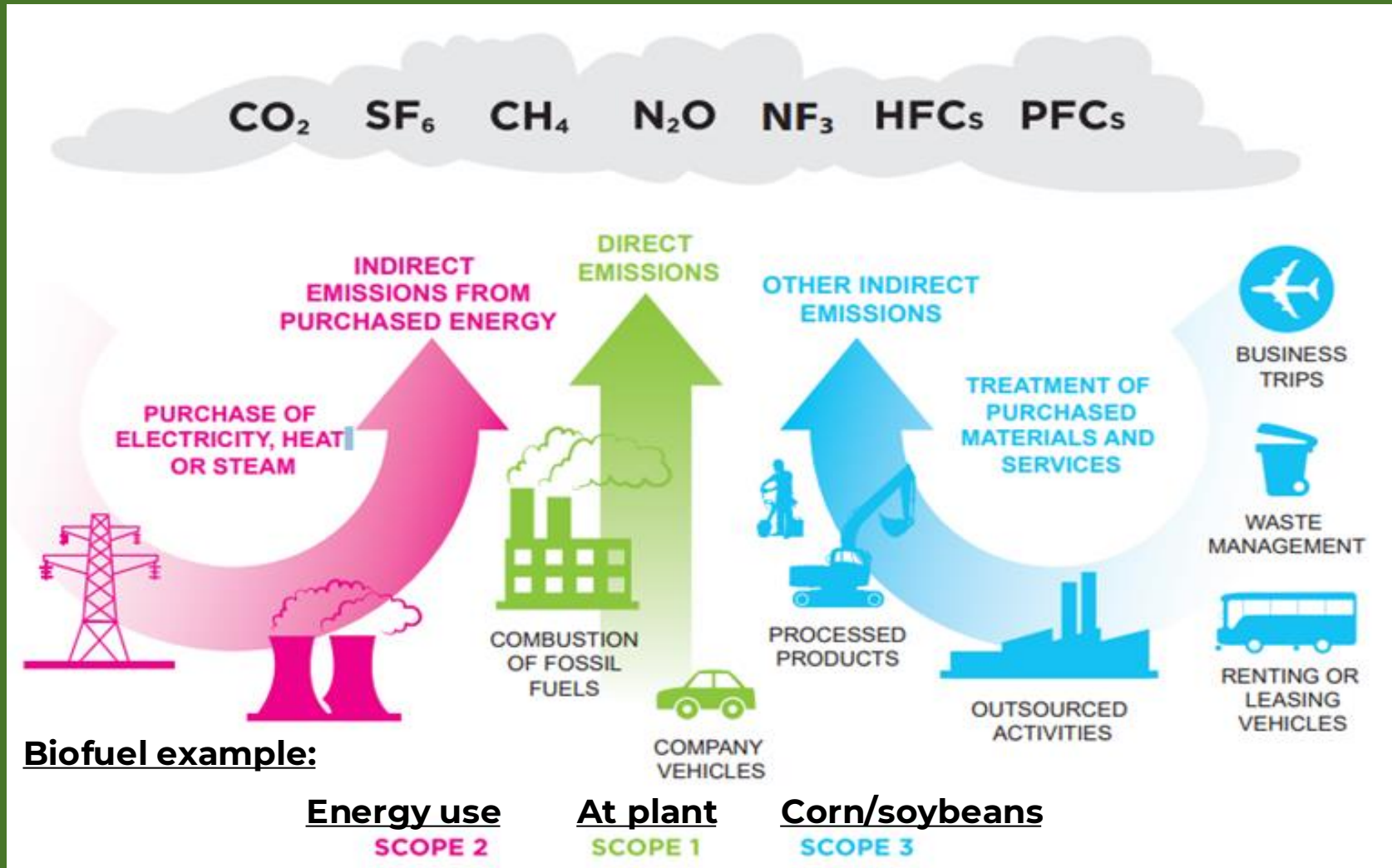
Ethanol carbon intensity is ~46% lower than gasoline carbon intensity.



Life Cycle Analysis 101



Continuum Ag



45Z & FEEDSTOCK CI

ETHANOL PLANT OPPORTUNITY: \$0.02/CI REDUCTION/GAL

Iowa Ethanol Plant CI

Corn's Share of that CI

On-Farm Ways to Reduce Corn CI:

- Reduced Inputs
- Cover Crops
- Manure
- Tillage
- Yield



Access to 45Z Tax Credits starts at CI < 50

Corn

Soybean

22.61*
kg CO₂e/mmBtu
YOUR CURRENT CI SCORE

*Based on the 2023 Argonne GREET model [What's Changed?](#)

8.35*
kg CO₂e/mmBtu
YOUR POTENTIAL CI SCORE

*Based on the 2023 Argonne GREET model

\$ 84/ac \$ 0.35 /bu

THIS IS NOT THE CI VALUE FOR THE FARMER
This is the estimated value to the biofuel company and based on a Standard 29.1 Score
Actual farmer payment is unknown and subject to future sharing of this value.

\$ 269/ac \$ 1.12 /bu

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CI Calculator

Cover Crop



Tillage

Reduced Till

Yield (bu/ac)



240

32% UAN (gal/ac)



15

Anhydrous Ammonia (lbs/ac)



180

Additional Fertilizers



Recalculate

Purchase CI Certification

ForGround by Bayer

Supporting Your Legacy, Together

Protect your soil with the help of a trusted name in agriculture and plant science.

ForGround is part of Bayer's commitment to scaling the adoption of regenerative agriculture practices. Adopting practices such as no-till, strip-till or cover-crops can support soil health and help protect and strengthen your land for the future generations.

Your free membership unlocks access to **personalized agronomic support, exclusive discounts and new revenue streams** for implementing no-till, strip-till or cover crops.

DISCOUNTS & OFFERS

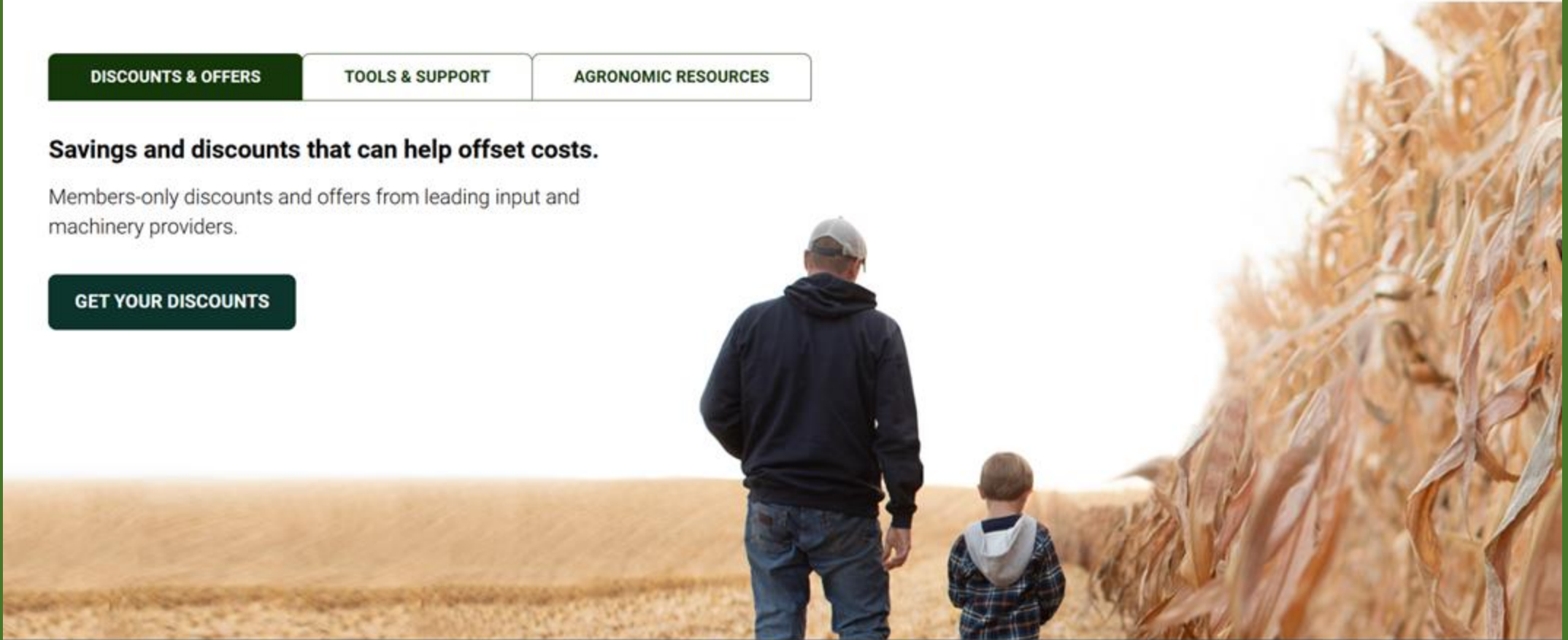
TOOLS & SUPPORT

AGRONOMIC RESOURCES

Savings and discounts that can help offset costs.

Members-only discounts and offers from leading input and machinery providers.

GET YOUR DISCOUNTS



How Much Can I Earn?

Early Adoption & Historical Practices Payment

Earn a one-time payment of up to \$48 per acre.

Fields with practice change on or after August 1, 2019, may be eligible to participate with the potential to receive up to four years of historical practice payment.¹

\$48

per acre

\$6 per acre/practice for years
2020, 2021, 2022 and 2023

\$6

per acre

Regenerative Agriculture Practices

Get rewarded for adopting regenerative agriculture practices.

The Bayer Carbon Program provides growers the opportunity to earn an annual payment of \$6 per acre, per practice for no-till/strip-till or cover crop practices.¹

\$4

per acre

Nitrogen Management Program

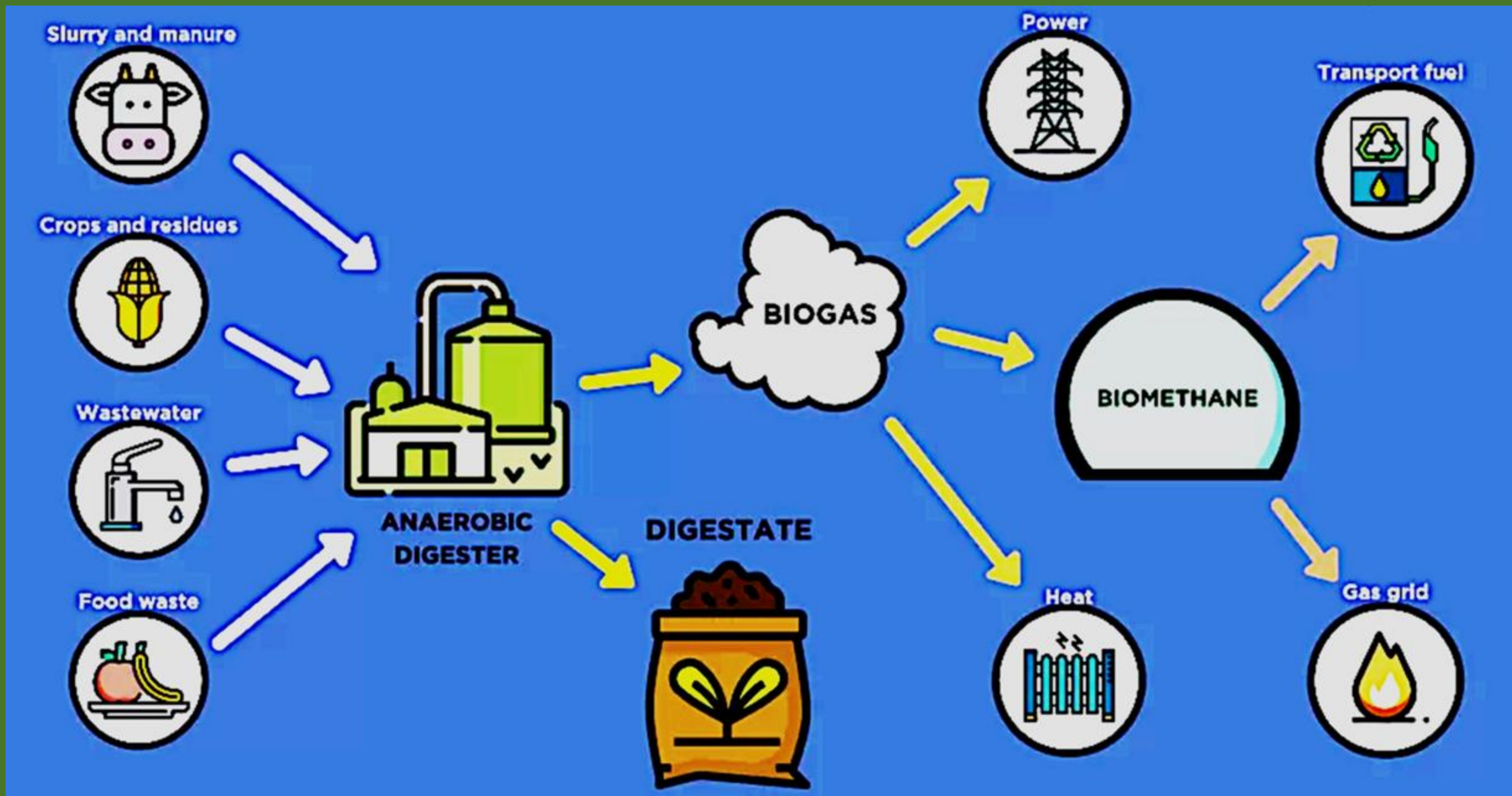
Get paid to reduce nitrogen application in fields planted with corn.

Growers can earn \$4 per acre for nitrogen reduction and use of select nitrification inhibitors, when a field is planted with corn.²

FAQ's

- Can I participate in all 3 of the mentioned programs? No, you can only take credit for the practice or the Carbon from that practice a single time.
 - You may participate in a practice based program (EQUIP, CSP, etc) and a carbon based program simultaneously
- What if I have been using no till and/or covers for 10+ years?
 - Some programs will pay for historical practices (Bayers), others will only allow an immediate practice change such as switching from no cover crops to cover crop use. Carbon Intensity only looks at the current years practices and their impact on the outcomes from that bushel produced.
- How do you know which program is right for you?
 - You don't, this is an evolving marketplace. Today's best opportunity may be a lesser opportunity when compared to tomorrow's. New programs and policies are in development, I would advise rigorous investigation and patience in commitments.

Other Energy Opportunities in Ag



Project Summary

The site is 24 acres and the technology will produce 3000 cubes of gas an hour.

Feedstocks will be for co digestion tanks and will be a combination of corn stalks, hog manure, chicken litter and distillery waste. This mix is not exclusive and can be changed to use other farm and crop waste.

Other producers use food waste and it is a popular feedstock.

All of the feedstock has to qualify for a carbon intensity score and this includes how its grown/kept, how its transported and stored to how much gas it can produce. This then qualifies for a particular RINS level and ultimately sold to a gas off taker.



Project Summary

Transportation of feedstock will be by semi truck and we will establish a traffic management plan to mitigate high density traffic impact.

The feedstock supply operation will be managed to allow hours of operation which will respect public activity.

The facility will operate 365 days a year for 24 hours a day.

Odor is not an issue - if there is a smell its the gas - you won't smell the gas because we are capturing all of it, if any escapes that's the equivalent of our money

Feedstock is covered trapping any odours.



ite design

