



SMART AG PRACTICES FOR LOW-CI SAF FEEDSTOCK PRODUCTION

September 2023





FORWARD LOOKING STATEMENT



Any statements in this presentation about Gevo's future expectations, plans, trends, outlook, projections and prospects, and other statements containing the words "believes," "anticipates," "plans," "estimates," "expects," "intends," "may," "will," "would," "could," "can" and similar expressions, constitute forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995, including, without limitation, statements related to our growth and future operating results and trends, our renewable natural gas ("RNG") project, our proprietary systems and technology, Verity Carbon Solutions, carbon intensity ("CI"), our Net-Zero Integrated Technology, our strategy, plans, objectives, expectations (financial or otherwise) and intentions, future financial results and growth potential, including our Net-Zero 1 Project, the timing and status of development of our projects, our ability to produce net-zero CI fuels and chemicals, our ability to finance and construct production facilities to produce products, intellectual property and other statements that are not historical facts. For this purpose, any statement that is not a statement of historical fact should be considered a forward-looking statement. We cannot assure you that our estimates, assumptions and expectations will prove to have been correct. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including risks relating to, among others: financing and supply chains, and global and U.S. economic conditions (including inflation and rising interest rates); and factors discussed in the "Risk Factors" of our most recent Annual Report on Form 10-K and in other filings that we periodically make with the Securities and Exchange Commission (the "SEC"). In addition, the forward-looking statements included in this presentation represent our views as of the date of this presentation. Important factors could cause actual results to differ materially from those indicated or implied by forward-looking statements, and as such we anticipate that subsequent events and developments will cause our views to change. Except as required by applicable law, we undertake no intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, and readers should not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this presentation.

ABOUT GEVO



OVERVIEW OF GEVO, INC. (NASDAQ: GEVO)



- Founded in 2005
- Rebooted in 2007 to pursue alcohols to hydrocarbons
- Number of employees: 97



Net-Zero Fuels and Chemicals

Total Addressable Market (TAM) 1,500BGPY of Fuels, ~695M mt of Nutritional Products and 390M mt of Chemicals and Plastics⁽²⁾

- **Drop-in Products for Jet fuel, Gasoline, Diesel, Chemicals and Nutritional Products**
- **Develop Projects, Invest in Capacity, License, Enable, Monetize Carbon Value**



Corporate Headquarters
Englewood, CO



R&D, Demo Facility
Luverne, MN



Jet Fuel & Gasoline Plant
Silsbee, TX⁽¹⁾



Net-Zero 1
In financing phase, Lake Preston, SD



Gevo RNG Facility
Operating in NW Iowa

Sources: US EIA, Statista.

(1) Owned by South Hampton Resources, Inc. and operated in partnership with Gevo.

(2) Sources: US EIA short term energy outlook May 2023. BNEF "Decarbonizing Petrochemicals", January 2022.

WHAT WE DO



Proprietary Systems and Technologies

Farms → Food & Feed

↓
Carbohydrates

↓
Alcohols

↓
Olefins

↓
Fuels & Chemicals

Net Zero Hydrocarbon Project Development, Investments, and Licensing



NZ-1 SAF at Lake Preston, SD⁽¹⁾



- “Farm to fuel” Carbon Life Cycle Analysis and tracking
- +57,000 acres, +20 farms signed up in the program, more expected to be added
- Monetization of Carbon Value

Specialty Chemicals, Plastics, and Fuels



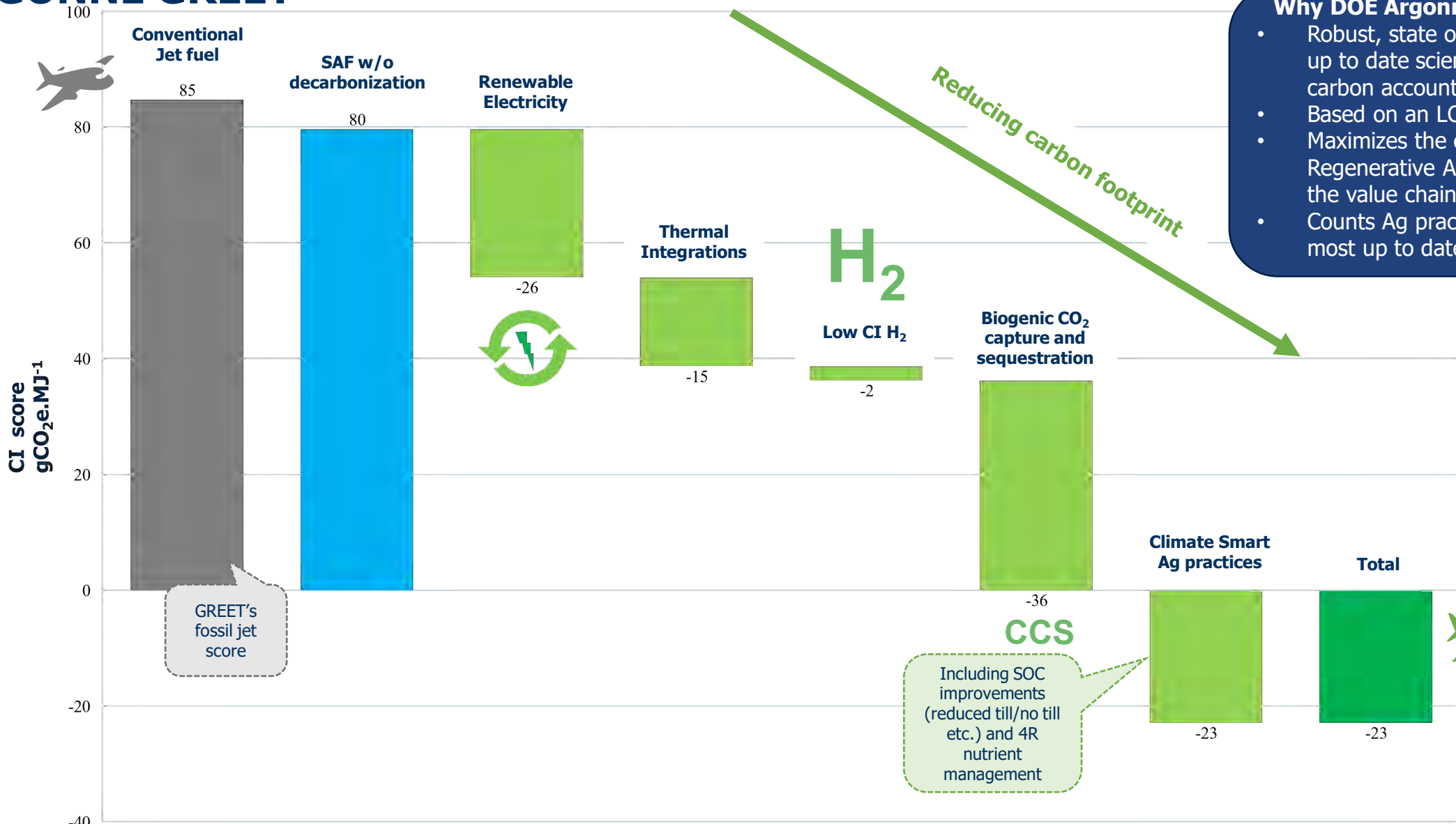
- Process development, engineering, catalyst development, market development, licensing



- Dairy Manure Business, Northwest Iowa
- 24,000+ cows, capacity 355,000 being expanded to 400,000 MMBtu/year
- Currently the RNG is being used to serve on-road transportation market, capable of serving SAF plants as they develop

(1) Project is currently being developed and is in project financing stage

HOW WE PLAN TO DRIVE CI DOWN: DECARBONIZATION DEMONSTRATED THROUGH HIGH-QUALITY MODELING WITH ARGONNE GREET



Why DOE Argonne GREET Model?

- Robust, state of the art, regularly up to date scientific model for carbon accounting
- Based on an LCA approach
- Maximizes the carbon value from Regenerative Ag to be shared along the value chain with farmers
- Counts Ag practices, CCS and has most up to date iLUC

GREET's fossil jet score

Including SOC improvements (reduced till/no till etc.) and 4R nutrient management

iLUC – Indirect Land Use. CCS – Carbon Capture Sequestration. CI – Carbon Intensity. LCA- Life Cycle Assessment

<https://doi.org/10.2172/1046913>; <https://greet.es.anl.gov/>; <https://publications.anl.gov/anlpubs/2012/07/73815.pdf>

**WORK WITH
FARMERS, REDUCE
FOSSIL INPUTS,
SEQUESTER PROCESS
EMISSIONS, AND
DRIVE THE GHG
FOOTPRINT DOWN**



WHAT ARE CLIMATE SMART AGRICULTURAL PRACTICES?



1. Reduced Tillage / No-Till

- Less diesel fuel usage than conventional till
- Less soil disturbance & erosion

2. Fertilizer Application:

- 4R Nitrogen Placement
 - (right source, rate, time, place)

3. Cover crops

- Less nutrient runoff & soil erosion
- More CO2 sequestered

4. Manure Application

- Non-chemical fertilizer

Impact = improved soil health & resiliency



Conventional Till



Reduced Till

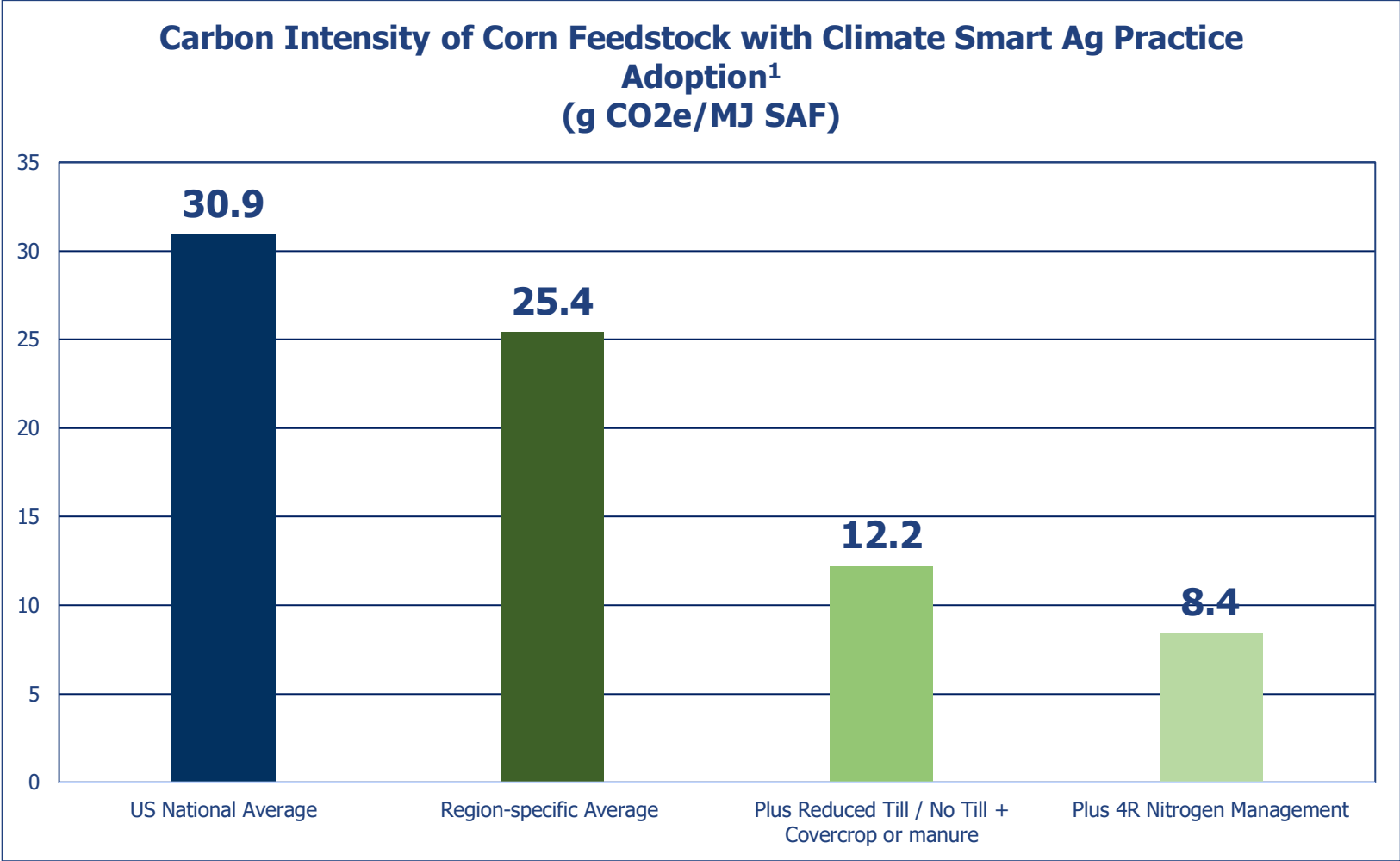


No Till

WHAT IS THE POTENTIAL CARBON INTENSITY IMPACT?



"You can't improve what you don't measure"



1: Modeled using ANL GREET FD-CIC 2022; Data from 18 counties in SD – USDA and NRCS.

HOW ARE CLIMATE SMART AG PRACTICES REFLECTED IN LOW-CARBON FUELS PROGRAMS?



1. Direct measurement of on-field inputs

- Diesel usage from tractors
- Fertilizer inputs

**EU RED II
CORSlA**

2. Yield

3. Soil Organic Carbon (SOC) Sequestration

- Reduced till, manure application, covercrops improve SOC

EU RED II

Currently the US Federal Renewable Fuel Standard (RFS) and California Low Carbon Fuel Standard (LCFS) do not recognize climate smart agriculture.

Gevo is demonstrating why policy should include climate smart agriculture:

- Significant climate benefits
- Quality Data
- Robust supply chain tracking
- Good for farmers – incentivize practice adoption

CI CALCULATION USING ANL GREET FD-CIC



- Emissions from fertilizers, fuel, lime, & pesticides are calculated per traditional attributional LCA.
- Soil Organic Carbon (SOC) emissions/reductions come from a lookup tool based on selection of management practices and county+state location.
 - SOC values are modelled in the CENTURY biogeochemical model for each county and combination of practices, then normalized to a baseline of typical practices - average tillage practice for the particular state, no manure, and no cover crops.

Annualized farming input parameters			
	User Specific Value	GREET Default Value	Unit
1.0) Farm size			
1.0.1) Farm size	1000		1000 acre
1.1) Yield			
1.1.1) Corn yield	178.4		178.4 Bushels/acre
1.2) Energy			
1.2.1) Diesel	7.2		7.2 Gallons/acre
1.2.2) Gasoline	1.3		1.3 Gallons/acre
1.2.3) Natural gas	87.0		87.0 ft3/acre
1.2.4) Liquefied petroleum gas	2.2		2.2 Gallons/acre
1.2.5) Electricity	69.3		69.3 kWh/acre
1.3) Nitrogen Fertilizer			
1.3.1) Ammonia	49.0		49.0 lbs N/acre
1.3.2) Urea	36.3		36.3 lbs N/acre
1.3.3) Ammonium Nitrate	3.2		3.2 lbs N/acre
1.3.4) Ammonium Sulfate	3.2		3.2 lbs N/acre
1.3.5) Urea-ammonium nitrate solution	50.5		50.5 lbs N/acre
1.3.6) Monoammonium Phosphate	6.3		6.3 lbs N/acre
1.3.7) Diammonium Phosphate	9.5		9.5 lbs N/acre
1.4) Phosphorus Fertilizer			
1.4.1) Monoammonium Phosphate	29.6		29.6 lbs P2O5/acre
1.4.2) Diammonium Phosphate	29.6		29.6 lbs P2O5/acre
1.5) Potash Fertilizer			
1.5.1) K2O	59.9		59.9 lbs K2O/acre
1.6) Lime			
1.6.1) CaCO3	573.0		573.0 lbs/acre
1.7) Herbicide			
	User Specific Value	GREET Default Value	Unit

	Based on User Specific Selection	Based on GREET Default Selection	
3) Soil organic carbon lookup			
3.1.) Cover crop	Cover crop	No cover crop	
3.2.) Manure	No manure	No manure	
3.3.) Tillage	No till	Reduced tillage	
3.4.) SOC emissions	-535.7	0.5 kg C/ha/yr	<input type="button" value="Refresh"/>

MEASURING, REPORTING AND VERIFYING FARM DATA



Field Overview	
Entity	Confidential
Farm	Confidential
Grower	Confidential
Field	Field 150
Field ID	#001565
Acres	151.5
Season	2021
Yield (bushel /acre)	210.6
Bushels	31.906 (810t)
CI from emissions	14.3 gCO ₂ e/MJ
CI including SOC	-15 gCO ₂ e/MJ
Total potential CI contribution from feedstock	-0.7gCO₂e/MJ
National Corn Average CI	30.1gCO₂e/MJ

Data Input Sources	
Granular Software	Fertilizer, Lime, Tillage, Herbicide, Insecticides, Yield, Moisture, Cover Crops
Fertilizer Suppliers	Chemical composition
MyJohnDeere Platform	Diesel, Gasoline
Declarative	Electricity, Nitrogen Management
Laboratories/ Supplier Reports	Manure, Soil sampling, Custom Applications, LPG
Google Earth	GIS Practice verifications, Land Use Change check
Certification	Farm verified

Real field-level results showing potential -31 CI reductions in SAF with precision ag, cover crops and conservation tillage

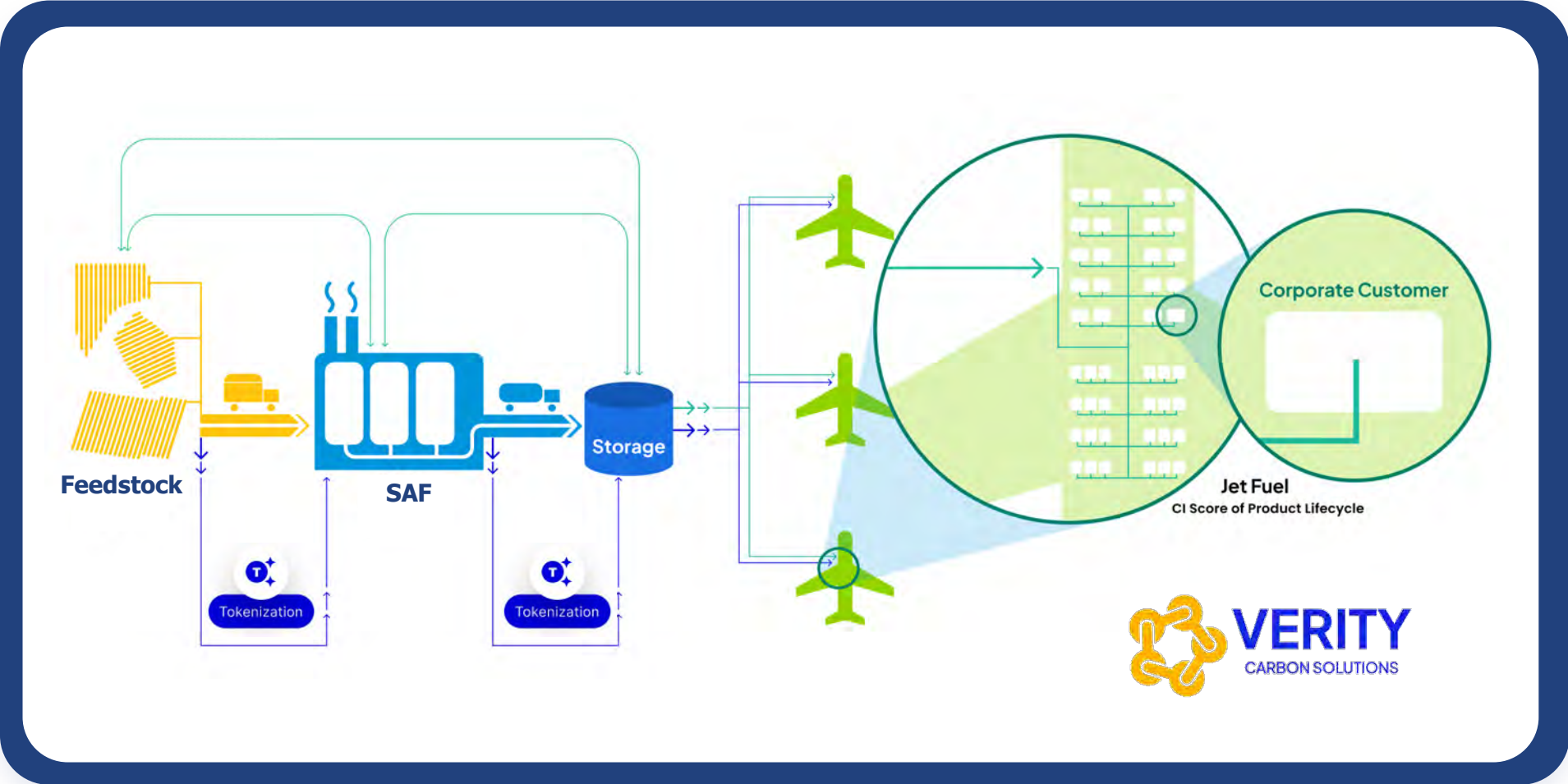
Now: Developing fully integrated and automated system for biofuels from field to gallon.



*Calculated as potential CI contribution in final SAF, excluding LUC

**Source: Mi. Wang, Argonne National Lab, "Updated Life-cycle Analysis of Biofuels with the GREET Model" Presentation at Task 39 of IEA Bioenergy TCP, April 2, 2020

FIELD TO FLIGHT DMRV* AND END-TO-END TRACEABILITY



Starting case to track **sustainability attributes** such as **Carbon Intensity (CI)** through the biofuel value chain

*Digital Measuring, Reporting and Verification

U.S. Department of Agriculture Chooses Gevo's Climate-Smart Ag Proposal for Grant Worth Up to **\$30 Million**



> **The GEVO Climate-Smart Farm-to-Flight Program**

The Project aims to create critical structural climate-smart market incentives for low carbon-intensity corn as well as to accelerate the production of sustainable aviation fuel to reduce the sector's dependency on fossil-based fuel. This project includes an immediate market opportunity to sell climate-smart, low-climate-impact corn.

> **Lead Partner**

Gevo, Inc.

> **Other Major Partners:**

Southwest Iowa Renewable Energy, LLC, Google, Farmers Edge, EarthOptics, South Dakota State University, Regen Ag Labs, Yard Stick, Double H Ag Services, Farmers Edge, AgSpire, PrairieFood, Stine Seed Farm, Holganix, Trace Genomics, MidState Agronomy, Double H Ag Services, Colorado State University, Iowa State University, Standing Rock (SAGE) Renewable Energy Power Authority

> **Primary States Expected:**

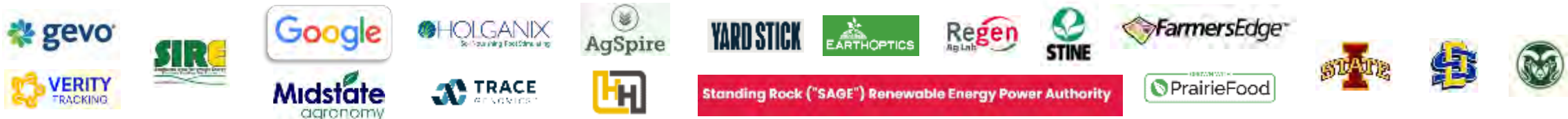
MN, SD, NE, IA, Tribal

> **Major Commodities:**

Corn

> **Approximate Funding Ceiling**

\$30,000,000



Thank you

345 Inverness Drive South ■ Building C ■ Suite 310 ■ Englewood, Colorado 80112 ■ gevo.com