



WHY PRAIRIE?

**How Restoring Native Grasslands Creates Value for
Agriculture, Renewable Natural Gas, & Rural Communities**

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Founder, Roeslein Renewables

TCBIOMASS CONFERENCE
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ROESLEIN KEY FACTS



15

FACILITIES
WORLDWIDE

1200+

EMPLOYEES
WORLDWIDE

1M+

SQ FT FABRICATION &
MODULAR ASSEMBLY
SPACE

870+

PROJECTS COMPLETED
IN MORE THAN 60
COUNTRIES

1800+

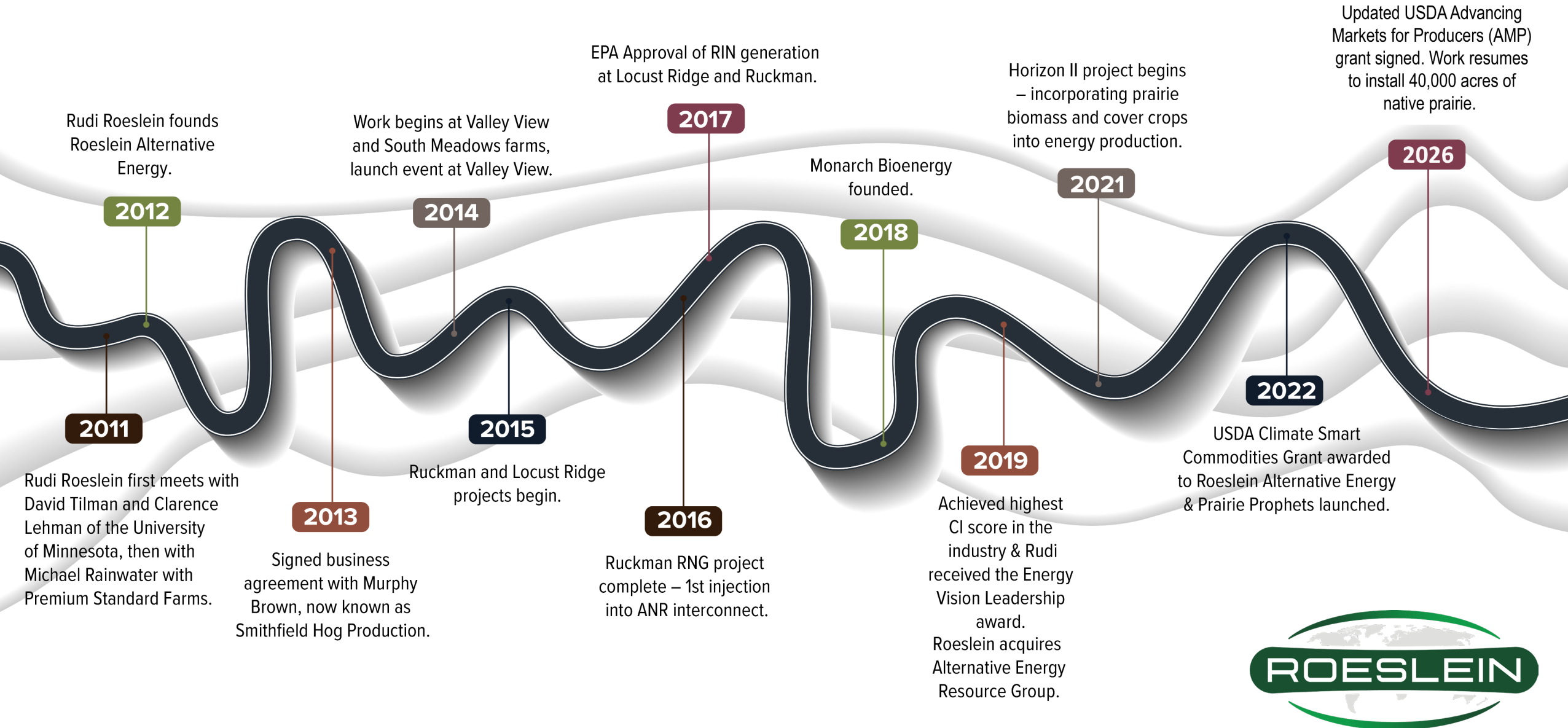
MODULARIZED
EQUIPMENT & SYSTEMS
SHIPPED ANNUALLY

36+

YEARS OF MODULAR
DESIGN-BUILD
EXPERIENCE



RAE TIMELINE





564M

Total Summary of Capex



270,720

Summary of Engineering
Hours



\$169.20M

Summary of Local
Construction Contracts



33+

Total Number of Sites/
Operation Facilities in
the U.S.



14

Total Number of States
Covered



17+

Total Number of
Congressional Districts



130+

Full-Time Operational
Employees

INNOVATION

Roeslein was the first to achieve multiple 1st milestones within the RNG industry

- Pathway with the EPA for swine manure
 - *D3 RIN*
 - *California RFS*
- Swine manure purified gas into the TransCanada pipeline
- Lowest RNG CI scores in swine industry (-400)
- Design/build Micro & Midsize Skids with multiple ranges to accommodate small farms
 - *35 to 240 SCFM for the Micro and 241 to 900 SCFM for Mid*
- 98% Methane Recovery



WHY PRAIRIE?

- Renewable biomass
- Cleaner water
- Healthier soils
- Wildlife habitat
- Carbon storage
- Agricultural resilience



"Biofuels made from high-diversity mixtures of prairie plants can reduce global warming by removing carbon dioxide from the atmosphere. Even when grown on infertile soils, they can provide a substantial portion of global energy needs and leave fertile land for food production."

Dr. David Tilman, University of Minnesota



FINDING BALANCE

ENERGY

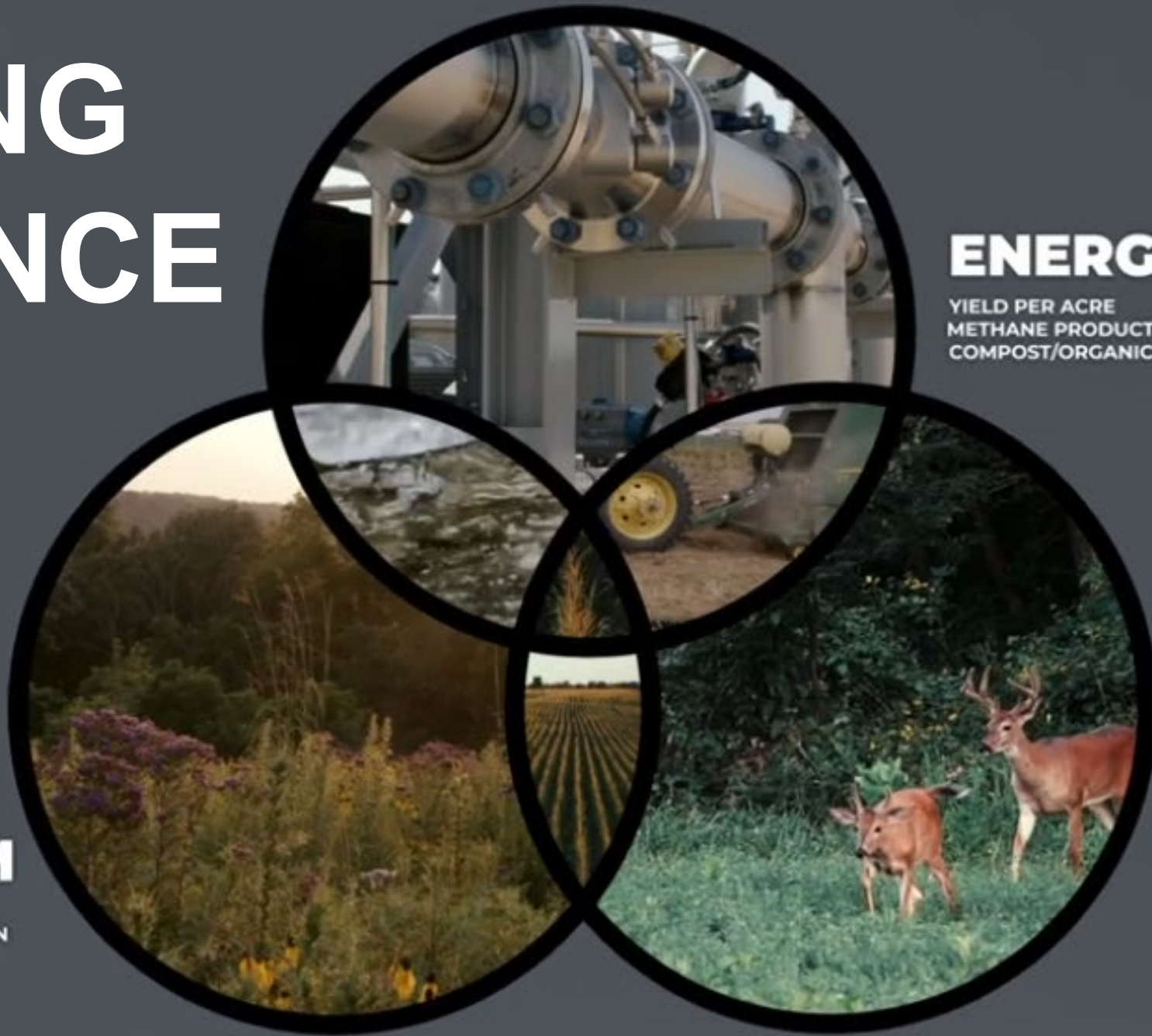
YIELD PER ACRE
METHANE PRODUCTION
COMPOST/ORGANIC FERTILIZER

ECOSYSTEM

CLEAN WATER
SOIL HEALTH / CO2 SEQUESTRATION
CARBON REBUILDING

WILDLIFE

POLLINATORS
GRASSLAND BIRDS
FOOD AND SHELTER



HORIZON II



“The future of energy depends on balance. When we align renewable energy production with ecosystem restoration and sound land stewardship, we create solutions that are economically strong, environmentally responsible, and built to endure for generations.”

Rudi Roeslein

STRIPS (avoided costs to society)

Science-based Trials of Rowcrops Integrated with Prairie Strips

Strategically adding 10% prairie to no-till corn-soy fields:

- 95% reduction in sediment loss ^a
- 37% reduction in water runoff ^a
- 77% reduction in phosphorus runoff and 70% reduction in nitrogen runoff ^a
- 70% reduction in subsurface nitrate concentrations (not tiled) ^a
- 75% reduction in nitrous oxide emissions at footslope position ^b
- 0.07 t/ac/yr increase in soil organic carbon or (in top 15 cm) ^c
- More than triple pollinator and double bird abundance ^a
- Influence on crop yield proportionate ^{a,d}
- Cheaper, more flexible than terraces; cost comparable to cover crops
- Conservation Reserve Program (CRP) eligible through CP43 for STRIPS

Sources: ^a Schulte et al. 2017; ^b Iqbal et al. 2015; ^c Dutter et al. 2023; ^d Damiano & Niemi 2021; ^a Hirsh et al. 2013; ^a Tyndall et al. 2013





THE REGENERATIVE BIOECONOMY

Improved farm profitability

- Removes underperforming acres from costly row-crop production
- Reduces input costs (seed, fertilizer, fuel, labor)

New revenue opportunities

- Conservation program payments (CRP, AMP grant, incentives)
- Potential income from recreation (hunting leases, ecotourism)

Risk reduction

- Stabilizes income on marginal land prone to drought, flooding, or erosion
- Reduces long-term soil degradation and input dependency

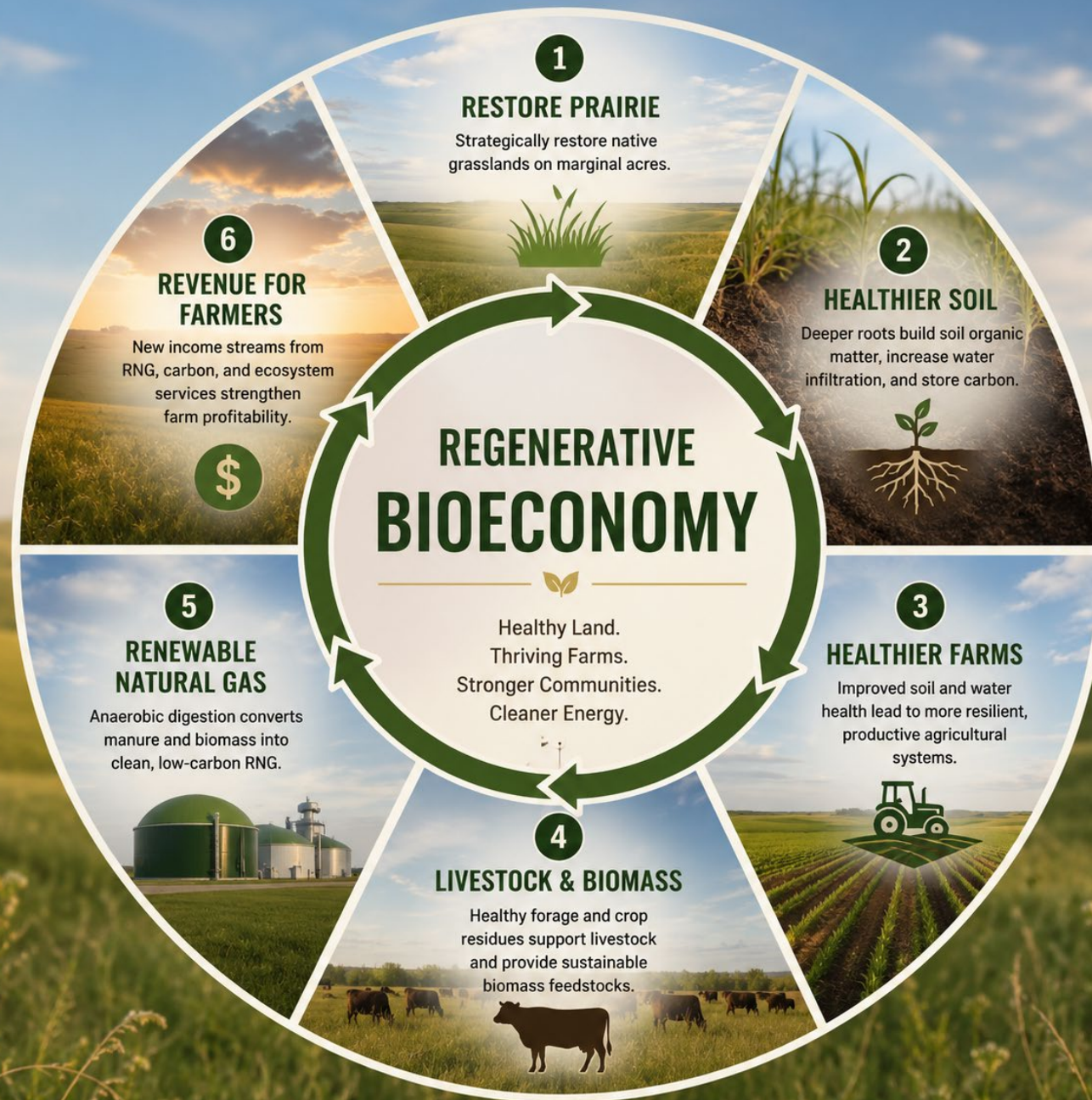
Long-term land value

- Improved soil health and water retention increase overall property value
- Positions land for future sustainability markets (carbon credits, ecosystem services)

Takeaway:

*Prairie restoration converts **financial liabilities into stable, diversified assets.***





RESTORE MORE PRAIRIE. THE CYCLE CONTINUES.

STRENGTHENING RURAL COMMUNITIES & ECOSYSTEMS

Water quality improvements

- Reduced nutrient runoff lowers water treatment costs for communities
- Supports cleaner rivers, lakes, and drinking water sources

Economic activity in rural areas

- Habitat restoration supports **outdoor recreation economies**
- Drives local spending (lodging, equipment, services)

Job creation

- Restoration, land management, and conservation services
- Long-term maintenance and monitoring roles

Public health & resilience

- Reduced flooding and improved watershed function
- Healthier ecosystems support food systems and biodiversity

Takeaway:

*Prairie restoration delivers **broad public value: economic, environmental, and social, far beyond the farm gate.***



30x30 VISION



USDA ADVANCING MARKETS FOR PRODUCERS (AMP)

- **\$80M USDA Grant**
- **Lead by Roeslein**
- **Missouri & Iowa**
- **Grand River Basin**
- **40,000 Acres Prairie**
- **14 Partner Orgs.**

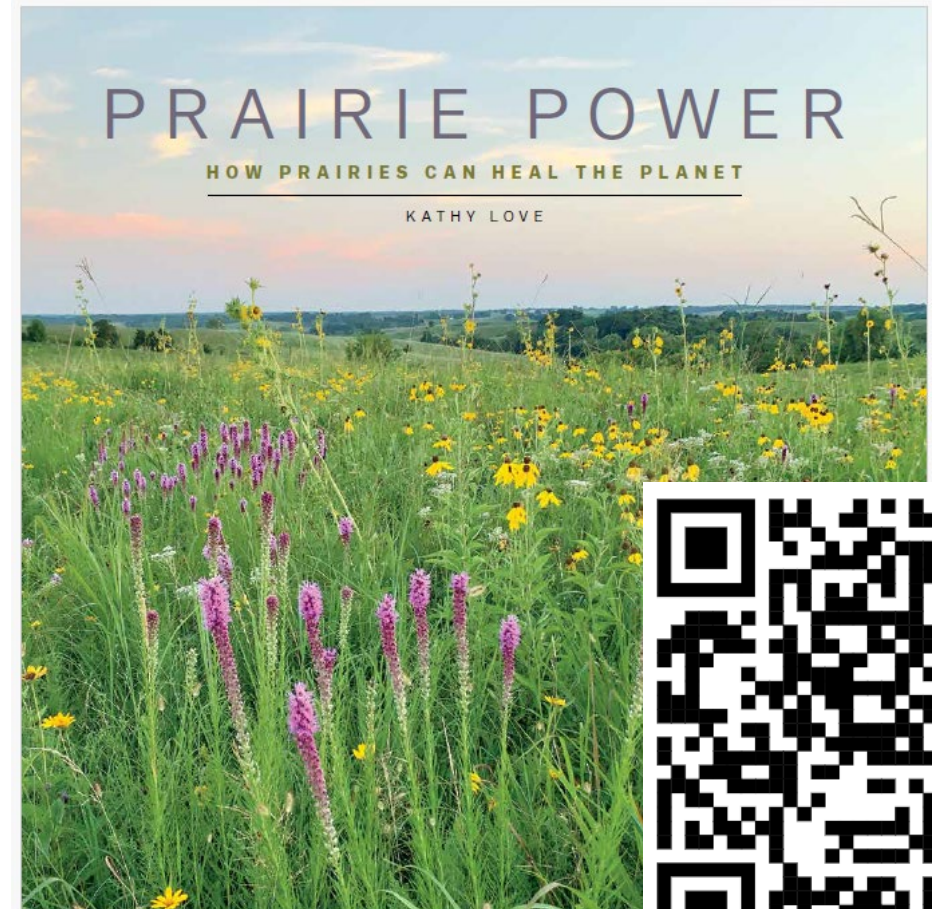


A field of purple flowers, possibly Salvia, with green foliage, set against a warm, golden sunset background. The sun is visible in the upper left corner, creating a soft glow over the scene.

“The most valuable renewable energy systems will be those that regenerate natural resources while creating economic value.”

Rudi Roeslein

PRAIRIE PROPHETS



***“The future of biomass isn't defined
by the energy we produce -
It's defined by the landscapes
we leave behind.”***

Rudi Roeslein



THANK YOU.

To learn more, please visit
roeslein.com/renewables

