

U.S. DOE BETO Deploying Purpose-Grown  
Energy Crops for Sustainable Aviation  
Fuel Workshop

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Successes and Challenges  
Developing a Commercial  
Biomass Supply

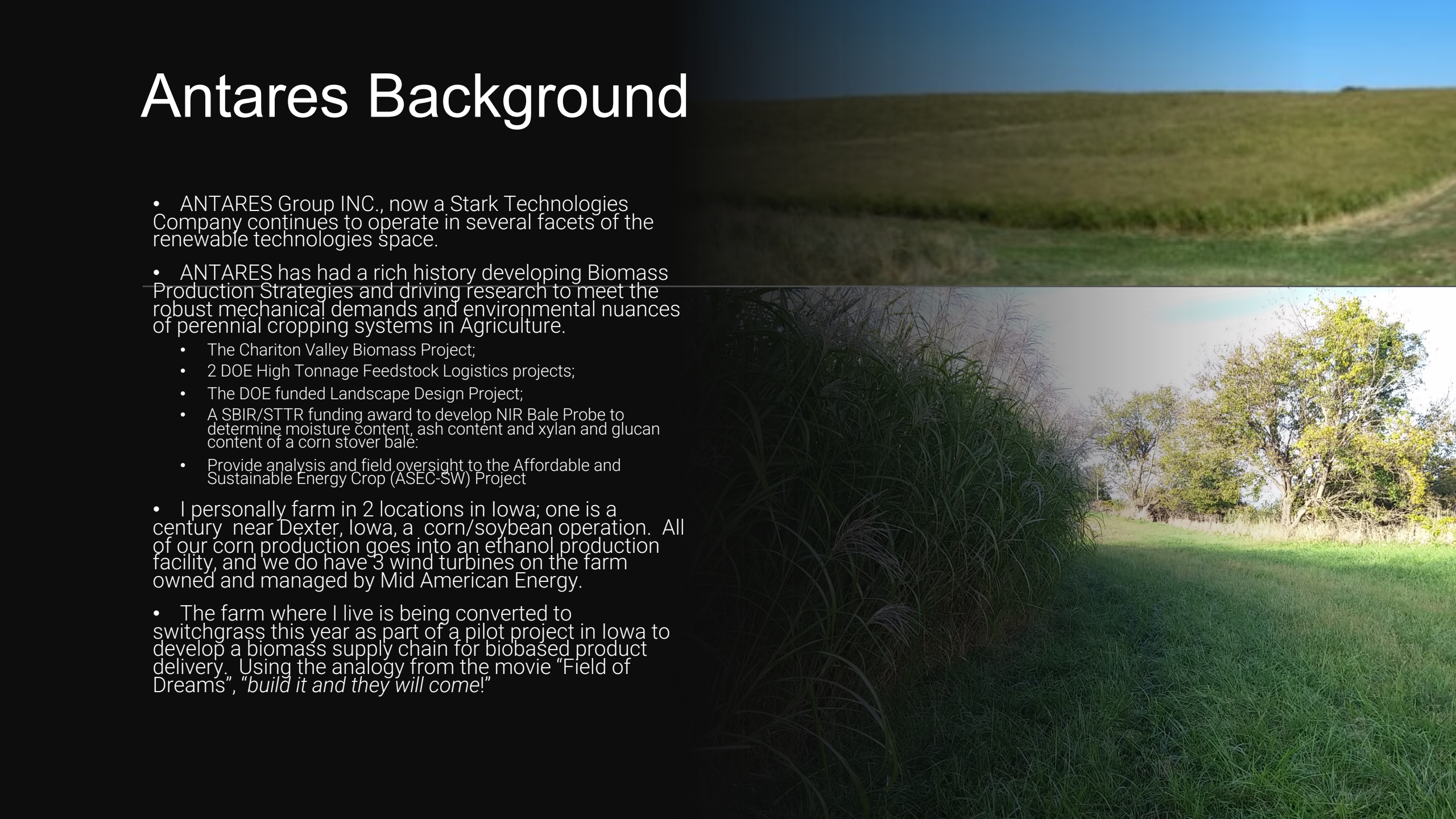
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ANTARES  
GROUP INC.

# Antares Background

- ANTARES Group INC., now a Stark Technologies Company continues to operate in several facets of the renewable technologies space.
- ANTARES has had a rich history developing Biomass Production Strategies and driving research to meet the robust mechanical demands and environmental nuances of perennial cropping systems in Agriculture.
  - The Chariton Valley Biomass Project;
  - 2 DOE High Tonnage Feedstock Logistics projects;
  - The DOE funded Landscape Design Project;
  - A SBIR/STTR funding award to develop NIR Bale Probe to determine moisture content, ash content and xylan and glucan content of a corn stover bale;
  - Provide analysis and field oversight to the Affordable and Sustainable Energy Crop (ASEC-SW) Project
- I personally farm in 2 locations in Iowa; one is a century near Dexter, Iowa, a corn/soybean operation. All of our corn production goes into an ethanol production facility, and we do have 3 wind turbines on the farm owned and managed by Mid American Energy.
- The farm where I live is being converted to switchgrass this year as part of a pilot project in Iowa to develop a biomass supply chain for biobased product delivery. Using the analogy from the movie "Field of Dreams", "*build it and they will come!*"



# Engage Farmers/Landowners by Minimizing their risk

BETO has done a good job identifying gaps in current agriculture systems and the perceived system demands to produce “Purpose Grown Biomass Crops”.

BUT

- › What is the mechanism to translate and transition the information to the Farmer/Landowner?
- › By what means and what metrics does the biorefinery use to reward the opportunity costs and risk?
- › Have the biorefineries coalesced around the needed biomass quality attributes and can the farmer deliver?
- › Will the Biorefinery execute take or pay agreements for the entire life of the production contract?

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# Understanding Sustainability and Carbon in the Equation

Acknowledge sustainability might look different inside the plant gate vs outside the plant gate.

- › Will the biorefinery expect to buy a commodity from the farmer or will the biorefinery expect to get a product with certain claims?
- › If a product is expected; will the product expectation be like what is expected from other raw product providers in the refinery supply chain?
- › Is it appropriate for agriculture to expect a biorefinery to sign NDA agreements with their biomass suppliers?
- › Are biorefinery operators flagging to Agriculture how claims will used and protected?

# THANK YOU



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