

## Rural Economic Development – Beyond the Business Park Model



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## From Project Work to Systems Change

- Individual projects do not change the trajectories of communities experiencing persistent poverty
- We need to change the system and create a new economy
- Farm to Fuel is a story about changing the system
- Need for a systems approach caused:



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Serving OK, TX, AR, LA, MS, TN, AL

## Farm to Fuel


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- Arkansas Green Energy Network value chain has 20 active partners and over 75 support partners
- alt.Consulting is coordinating organization
  - Started in 1998
  - Community Development Financial Institution
  - 501(c)(3) economic development organization working with over 320 entrepreneurs each year
- Creating 100 jobs through farm to fuel demand driven model
- Commercializing innovative technology in Delta
- Introducing a new crop to farmers of the Delta
- Replicating model across 25 communities in the Delta region




## Arkansas Delta: Assets and Challenges

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<ul style="list-style-type: none"> <li>▪ Rich with entrepreneurial spirit</li> <li>▪ Economic base: Agriculture</li> <li>▪ Most fertile farmland in the country</li> <li>▪ 870,000 acres of land fallow during winter season</li> <li>▪ Excellent network of two-year colleges</li> <li>▪ Culture of Fried Foods = waste vegetable oil!</li> </ul>		<ul style="list-style-type: none"> <li>▪ Poverty rate &gt; 22%</li> <li>▪ Extractive agricultural economy based on commodity crops</li> <li>▪ Many minority farmers and small scale farmers struggle to stay on land</li> <li>▪ ADTEC renewable energy training programs can't place graduates due to lack of jobs</li> </ul>
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## AGEN Building Blocks

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### Understanding Demand


**Regional Demand**

- Valero: Needs biofuel to meet Renewable Fuel Standards

**Local Demand**

- City of DeWitt: Seeking price stability and energy independence
- Farmers are number one user of diesel in local economies of the Delta region
- Local consumption key to profitability during ramp up

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## Camelina

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- Researching Camelina varieties on ASU and PCCUA test plots since 2011; field testing began in 2013
- Winter oilseed crop for Delta:  
Plant in October, harvest early May
- Crushed into oil and Omega 3-rich meal for feed
- Produce biodiesel from oil and animal feed up to 10%
- Rotational crop for soybeans, summer vegetables

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## Waste Vegetable Oil



- DeWitt has successful recycling program started through county and city efforts
- Adding WVO Recycling for residents
- Hub of 10 county waste vegetable oil recycling district
- Purchased truck and equipment with General Improvement Funds
- Hired part time staff to operate the collection equipment and manage collections with the intention of transitioning to the entrepreneur in 2015
- Sources of WVO
  - Prisons -Hospitals -Schools -Colleges
  - Restaurants -Convenience Stores

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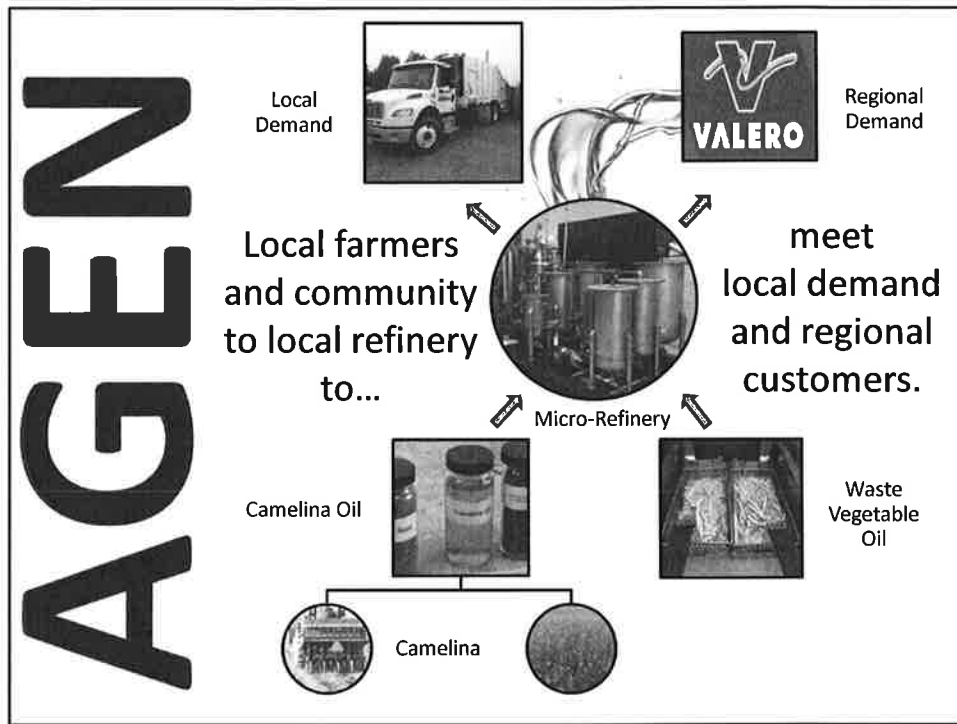
## Micro-Bio-Refinery



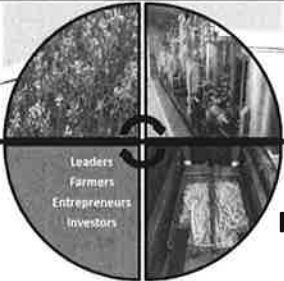
- 2011: Technology developed at Mid-South Community College as a teaching tool
- Compact, fully automated, waterless, multiple feedstocks
- Low capital investment for entire refinery installation
- Generates ASTM standard fuel that can be blended with petroleum diesel or used alone (B100) in any diesel engine
- Produces 200,000 gallons annually
- City of DeWitt purchasing with DRA funding and General Improvement funds and will lease to entrepreneur

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**Local Ownership**



**Making wealth stick means local ownership and control!**

AGEN Developed Ownership Models

1. Local entrepreneurs own businesses. Use own capital or secure local investors
2. Local municipality owns equipment and leases it to entrepreneurs to operate. Creates source of revenue for city. DeWitt example
3. Local farm coop owns equipment. Coop members grow crop, coop processes biofuel and sells it back to members.

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## Engaging Low-Income People, Businesses and Places

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### 1. Minority Farmers and Small-Scale Farmers

- Camelina experts provide free technical assistance – from planting to harvesting, depending on the needs of farmer
- Guaranteed market and price for their harvest
- Group purchasing of Camelina seed

### 2. Graduates from Two-Year College Renewable Energy Program

- Locating value chains in towns that offer program
- Connect students with entrepreneurs in value chain
- Position students to eventually purchase businesses

### 3. Low Resource, Rural Communities

- New source of revenue, generate sales tax dollars

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## Economic Development Opportunities

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- Opportunity to generate income from land not used during winter months
- New businesses and jobs
  - Agronomic services
  - Camelina processing
  - Waste vegetable oil collection
  - Biofuel processing
  - By product businesses
- Community and regionally based collaboration for economic development



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## County leadership: Key collaborative partner

- Knows resources of region and forces that drive local economy
- Relationship with
  - policy makers
  - economic development organizations
  - community leadership
  - residents in county
- Transactional partner in value chain: user of the fuel



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## Building Multiple Forms of Capital

Capital	Impact
Intellectual	Mindset shift from exporting outputs to creating more local opportunities and regional economic development strategies
Individual	Online agri-entrepreneurship training through 2-year colleges
Social	Deep collaboration between city and county governments, entrepreneurs, non-profits, colleges, regional and state organizations
Built	Turning environmental hazard into viable business
Political	Four state legislators actively supporting AGEN through GIF funds
Natural	Regional waste vegetable oil recycling, clean fuel used by farmers and city
Financial	Securing private investment for local entrepreneurs, creating new opportunities for other entrepreneurs, new revenue opportunities for municipalities and counties
Cultural	Lifting up agricultural and entrepreneurial culture as agents for local change

## Contact Information



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[www.CommunitiesU.org](http://www.CommunitiesU.org)

More info about Farm to Fuel at:  
<http://altconsulting.org/renewable-energy/>