Utilizing Brownfields to Power America

NACDEP Annual Conference
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May 20, 2012

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Program Objectives

- Brownfield to Greenfield?
- Renewable Energy Drivers
- Brownfield Redevelopment – Benefits & Challenges
- Kirby Tire Recycling Project
    - Project overview
    - Organizational support & partners
    - Current status
- Recommendations on replicating in other rural communities?
    - Project process flow
    - Keys to success
    - Lessons Learned
- Extension's role in brownfield to greenfield redevelopment strategies?

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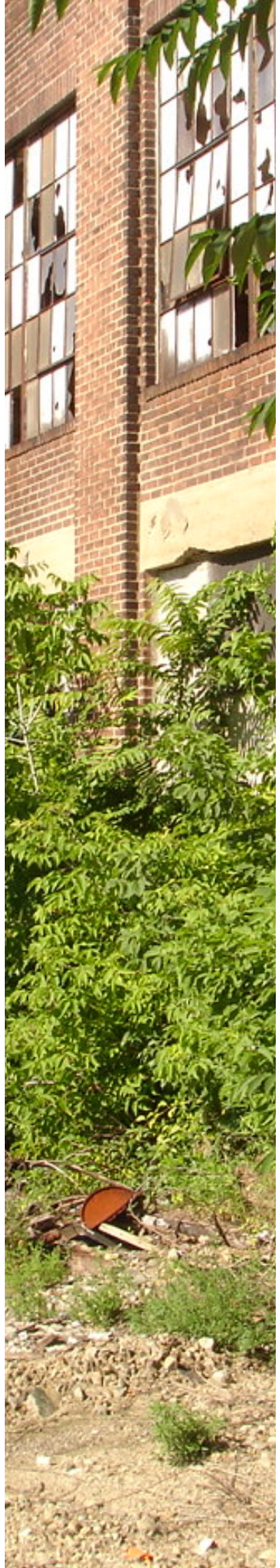

What is a Brownfield?

The U.S. EPA defines the term "brownfield site" as real property, in which the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

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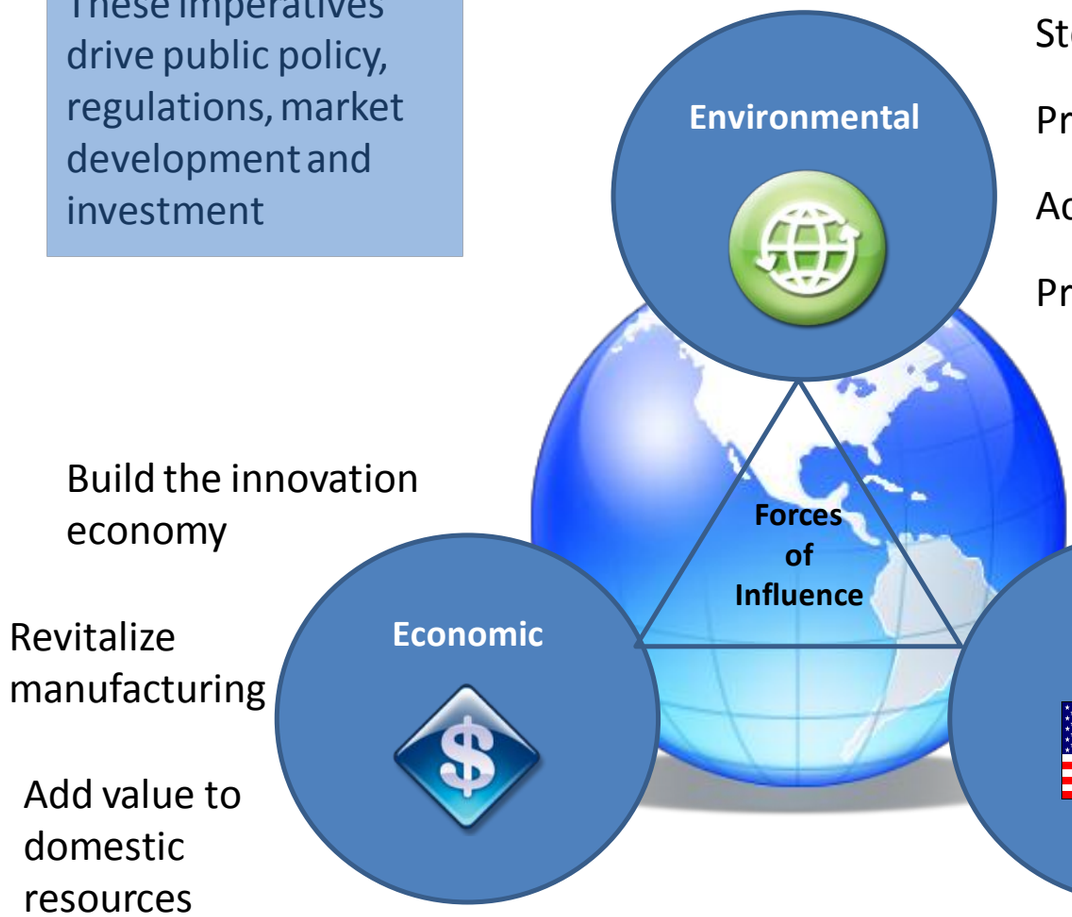
Energy Drivers & Trends

These imperatives drive public policy, regulations, market development and investment



Stop climate change

Prevent and mitigate pollution

Achieve sustainability

Preserve the environment

Build the innovation economy

Revitalize manufacturing

Add value to domestic resources

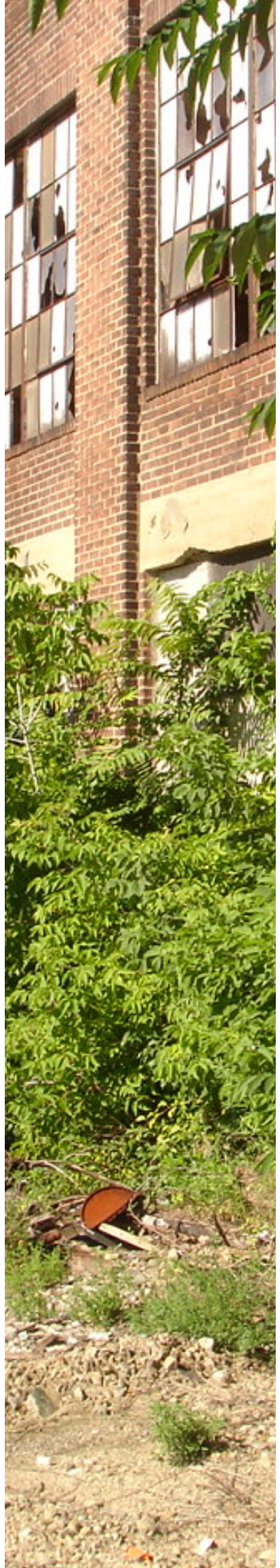
Achieve distributed urban and rural economic development

Reduce dependence on foreign resources

Improve balance of trade

Reduce exposure to resource price volatility

Image Source: Battelle Study on Assessment of Renewable Energy
http://www.renewmfg.org/Files/Admin/Battelle%20Study%20Executive%20Summary.pdf



Brownfield Community Impacts

- Abandoned or dilapidated buildings on brownfield sites signal neglect even in an otherwise well-maintained neighborhood.

- Contaminants found on brownfield sites can pollute soil, air, and water resources both on- and off-site posing environmental and public health threats.

- Neglected sites are a breeding ground for illegal activities impacting public safety.

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Brownfield Redevelopment – Potential Project Benefits

- **Infrastructure** - Often have critical infrastructure in place including electric transmission lines, roads, and water.
- **Zoning** - Adequately zoned for such development.
- **Demand** - Energy Projects provide an economically viable reuse for sites with significant cleanup costs or low real estate development demand.
- **Land Use** - Take the stress off undeveloped lands for construction of new energy facilities.
- **Employment** - Provide job opportunities.
- **Revenue Generation** - Restore tax base to a local community.

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Brownfield Redevelopment - Potential Project Benefits (cont.)

- Contaminated land can support the increasing demand for renewable energy development.

State of West Virginia
15,507,200 acres

- According to the U.S. EPA there is an estimated 490,000 potentially contaminated sites covering almost 15 million acres in the U.S.

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Brownfield Redevelopment - Potential Project Challenges

- High cost associated with site cleanup.
- Environmental requirements
  - Phase I
  - Phase II
  - Voluntary Action Program (VAP)
- Clear property title to gain site control.
- Developer / Investor concern over ongoing liability.
- Lengthy Process may not always align with developers timeline.
- Lack of understanding state and federal brownfield rules and support programs.

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What was the catalyst for the Brownfield to Greenfield project in Wyandot County?

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Kirby Tire Fire – History

- 25 million tires / 110 acre site.
- Tire piles 40 ft. high, 200 ft. wide, and 1,000 ft. long.
- Court shut down Sept. 1998.
- 250 firefighters, the Ohio Air National Guard, U.S. EPA, Ohio EPA and others spent five days battling the August 1999 arson fire.
- Removed 65,000 tons of waste.
- Treated 17,335,021 gal. of water
- 26 million dollar clean up.

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OSU Extension's Role in the Kirby Project

- Delivered Educational Programming on Brownfield Redevelopment?
    - Clean Ohio Brownfield Revitalization Fund - **Brightfield and Cleanfield Program**
    - Ohio EPA Voluntary Action Program (VAP)
- Established local task force
- Incorporate the brownfield project into the Comprehensive Economic Development Strategy.
- Facilitated meetings with state agencies.

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Organizational Support & Partners

- Renewable energy suppliers
- Utilities
- Developers & Investors
- Land owners
- State Partners
  - EPA Regional & State representatives
  - Ohio Department of Development
  - Ohio Department of Energy
- Local Community Partners
  - County Commissioners
  - Township Trustees
  - Economic Development Board
  - Chambers of Commerce
  - Local champion from environmental industry

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Kirby Tire Project – Status Update

- Debrief from PSEG Wyandot Solar Project.
- Develop local brownfield redevelopment subcommittee.
- Phase I environmental study - Locally funded .
- Signed MOU.
- File Ohio EPA - Voluntary Action Application.
- Awarded $186,000 to finalize Phase II environmental study.
- Submit Covenant Not to Sue to Director of Ohio EPA.

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Keys to Success – Process Flow

Do Your Homework

Outreach & Education

Build Your Local Team

Identify Brownfield Sites

Will Renewable Energy Work?

Gain Consensus & Structure Reuse Plan

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Keys to Success

1. **Research brownfields (Do your Homework)**
    - State environmental regulations.
    - State and federal funding programs.
2. **Outreach & Education**
    - Conduct educational sessions with local stakeholders, elected officials, and general public.
3. **Build your local team**
    - List local stakeholders and role they will play in the project.
    - Identify state level and utility partners.

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Keys to Success

4. **Identify property**
    - Map out the location of brownfields in the community.
    - Identify property ownership and liens.
    - Confirm it meets state standards of brownfield.
    - Inventory completed environmental studies.
5. **Is site a good fit for a renewable energy project?**
    - Understand state renewable energy policy.
    - What is the best renewable energy technology for the site?
    - Identify electrical substations and discuss the potential with the utility provider.
6. **Develop local consensus & structure a reuse project**
    - Establish timeline and budget for required cleanup
    - Identify potential investors and developers
    - Host monthly status meetings

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Lessons Learned

1. Know the brownfield rules!
2. Understand how renewable energy fits into your reuse strategy. Is it feasible?
3. Generate local momentum on potential benefit of project.
4. Draft Memorandum of Understanding (MOU)
    - Local government
    - Local economic development office
    - State EPA
    - State Department of Development
    - Developer
    - Environmental firm
5. Develop a Transparent Timeline – plan for the worst and hope for the best.

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Extension's Role

- Set the Stage - Facilitate the teambuilding and visioning process.

- Educate the local elected officials and local leaders on brownfield redevelopment.

- Enhance local understanding through new programming focused on renewable energy technologies as a viable redevelopment use of brownfield sites.

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Extension's Role – Additional Resources

Siting Renewable Energy on Potentially Contaminated Land

http://www.epa.gov/oswercpa/

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Extension's Role – Additional Resources

State EPA Incentive Fact Sheet

http://www.epa.gov/oswercpa/incentives.htm

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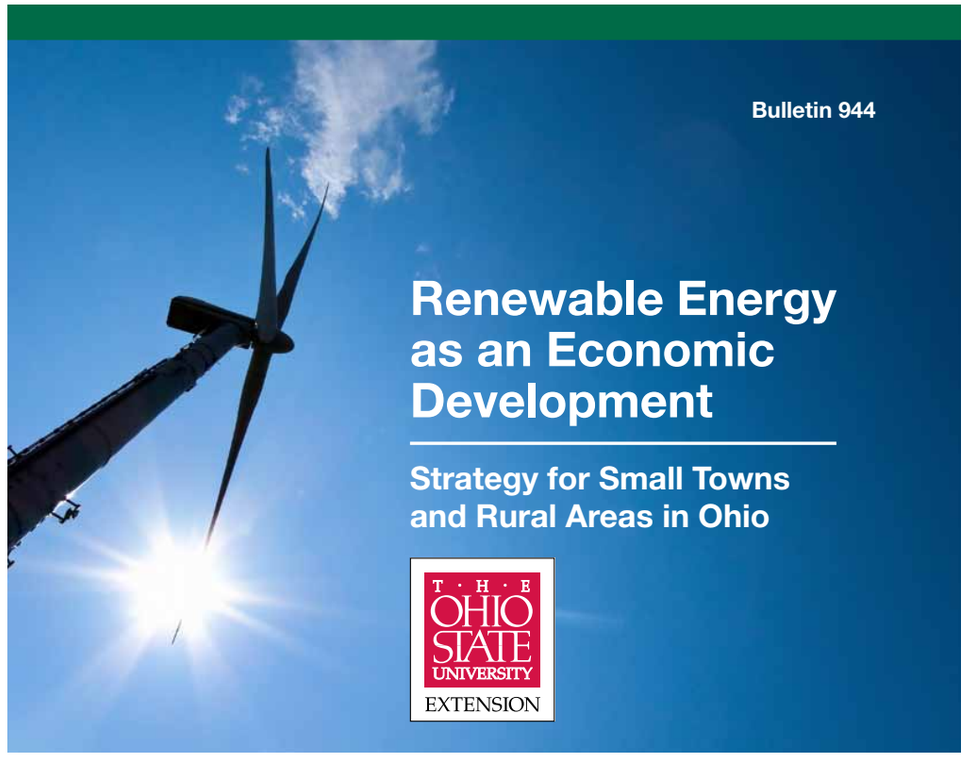
Extension's Role – Additional Resources

OSU Bulletin #944

Renewable Energy as a Rural Economic Development Strategy

http://energizeohio.osu.edu/home



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Questions?

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