

Redeveloping Landfills: The Livingston Landfill Case Study

Hoosier Energy Rural
Electric Cooperative, Inc.



Livingston Development

Livingston Landfill Gas to Energy Facility

52

Hoosier Energy Rural Electric Cooperative, Inc.



Hoosier Energy's Renewable Portfolio

Clark-Floyd Landfill
• 3.5 MW

Dayton Hydro PPA
• 3.6 MW

Story County Wind PPA
• 25 MW

Osprey Point CBM
• 13 MW

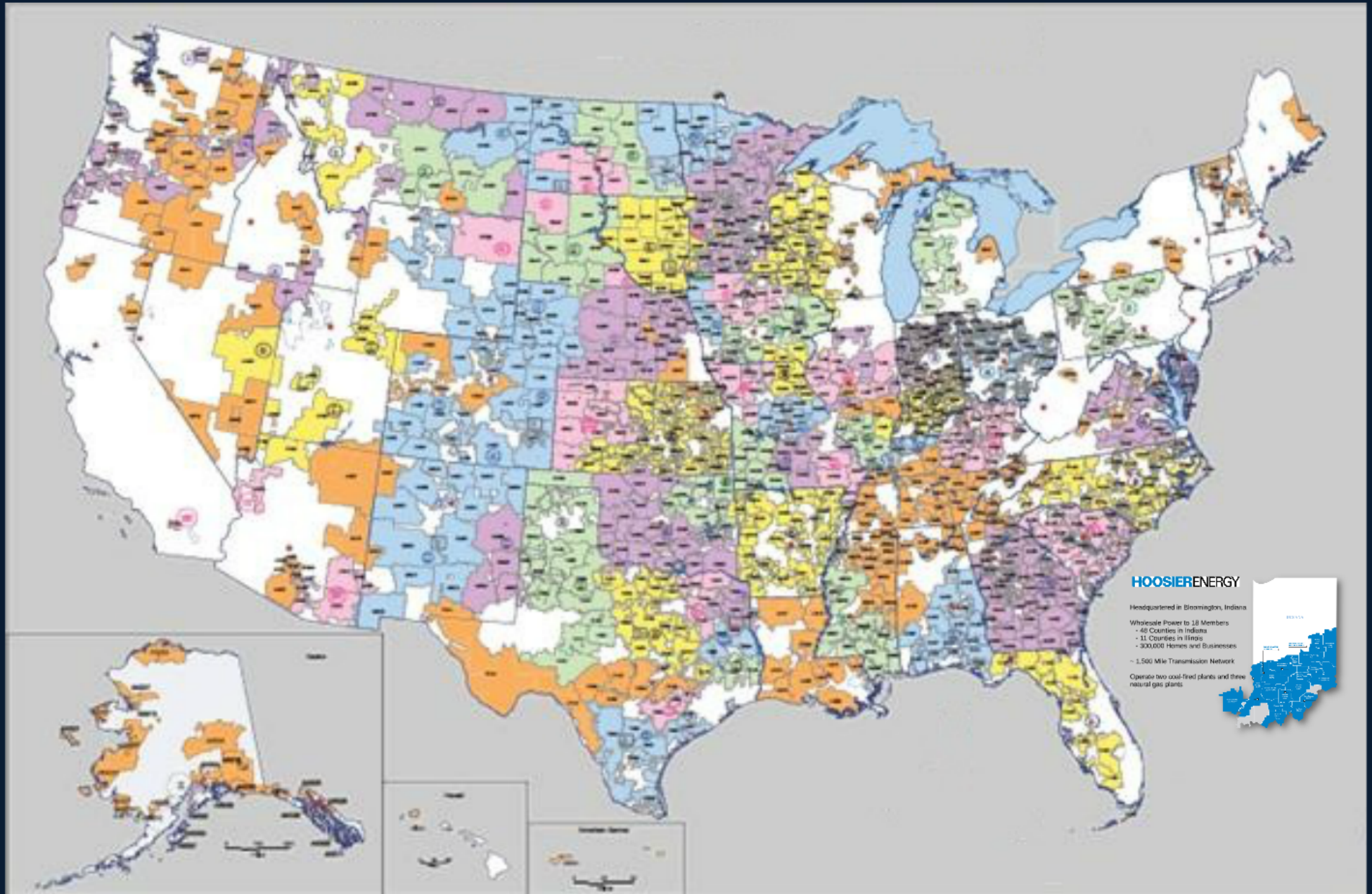
Livingston Landfill
• 15 MW



Why Landfill Gas to Energy?

- Often Rural and Served by Member Systems
- Base Load Power
- Member Recognition
- Board Renewable Energy Policy

U.S. Electric Cooperative Map



HOOSIER ENERGY

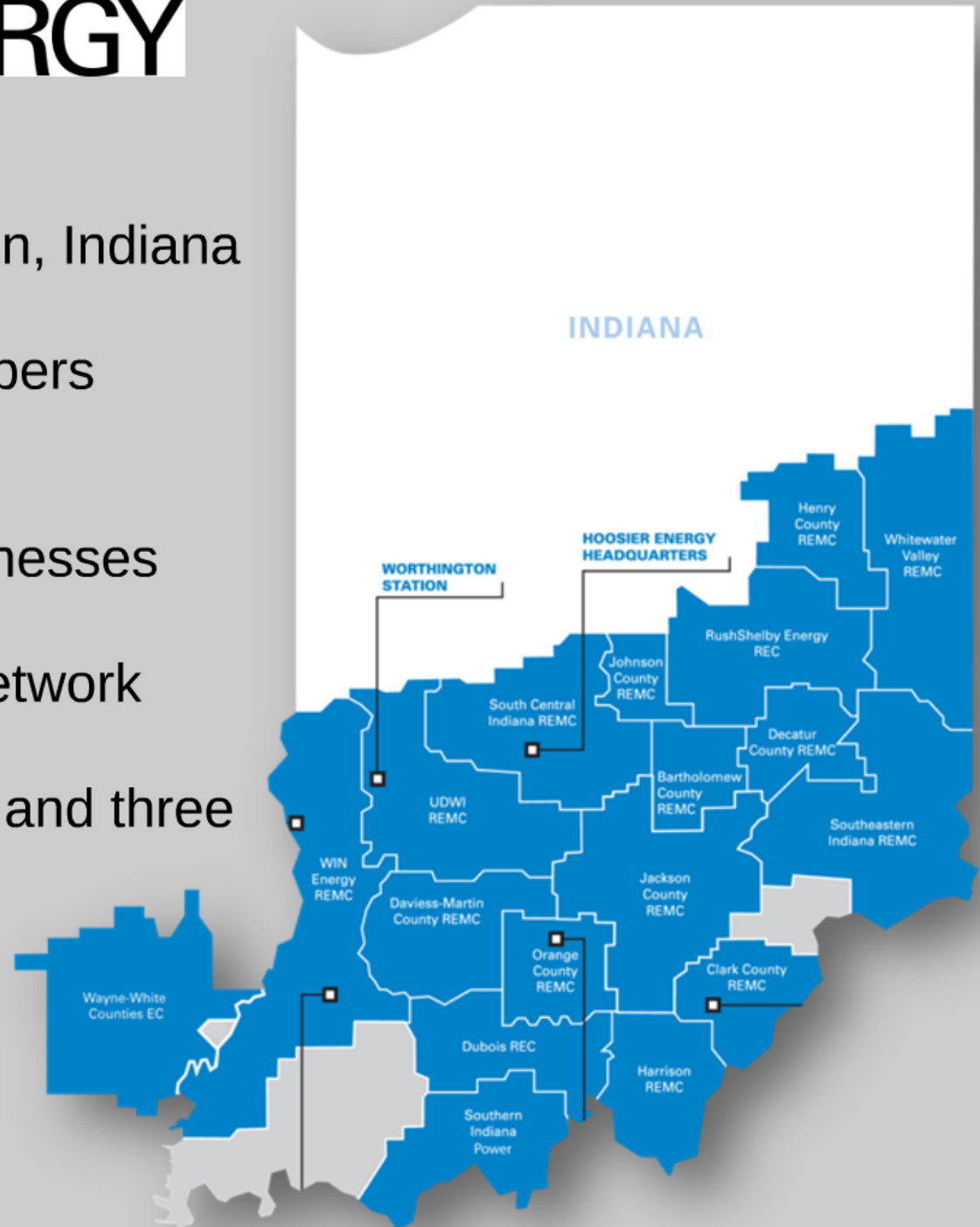
Headquartered in Bloomington, Indiana

Wholesale Power to 18 Members

- 48 Counties in Indiana
- 11 Counties in Illinois
- 300,000 Homes and Businesses

~ 1,500 Mile Transmission Network

Operate two coal-fired plants and three natural gas plants



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Republic Services Landfill

6,000 Tons/day

5,000 - 6,000 scfm

Interconnected to ComEd in the PJM Market



Facility

3 Solar Taurus 60 Turbines- 15 MW

Resource Technology Corporation Owned and Commissioned the Facility in 2001

Facility Idled in 2006

Valid Title V Air Permit



Process

Experience from Previous Projects

Research

- Owners
- Facility
- Equipment
- Permits, Permits, Permits!

In-house Expertise

- Permits
- Project Management
- Contracts



Process

Knew What We Didn't Know

Brought in Outside Help

- Republic Services
- Ameresco
- Solar Turbines
- Burns and McDonnell
- Golder Associates

Purchased the Facility in 2011

Work to be Done

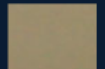
Siloxane Removal

Compressors

Turbine Overhauls

New Controls

Interconnection



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Benefits of Redeveloping

Time Savings
Cost Savings
Reduce, Reuse, Recycle
Community Engagement



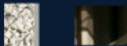
Lessons Learned



- Strong Project Management
- Pick the Right Partners
- Community Support

Development Thoughts

Don't be Afraid to Redevelop
Be Flexible - Redevelopment Projects
Can Happen Quickly
Do Your Research Early
Build Relationships



Thank you



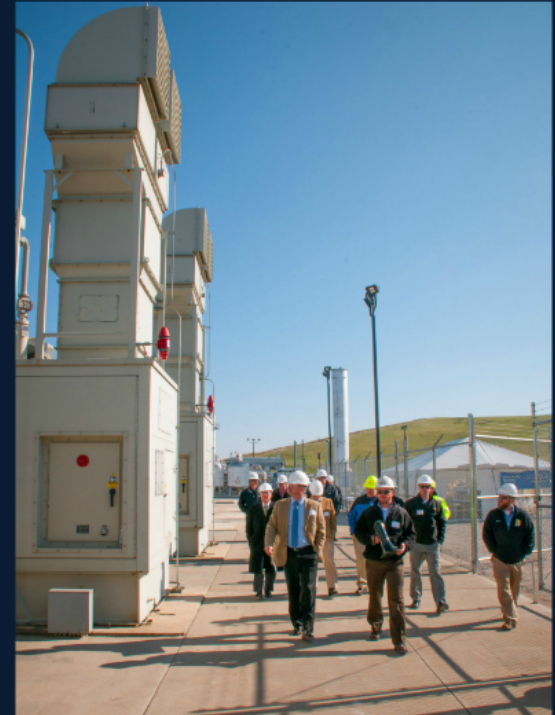
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