Rural Economic Impact of a Statewide Energy Efficiency Initiative:

An Analysis of Three Non-Metropolitan Counties Participating in Wisconsin Focus on Energy

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Rural Economics and Energy Efficiency

- Rural counties face many challenges

- Rural economic development is a goal of Wisconsin’s statewide efficiency program

- Energy efficiency is potentially a cost effective development strategy for rural counties

- Consistent with other development strategies
Research Questions

- What has been the rural economic impact of improved energy efficiency?
- What is the potential economic impact of improved energy efficiency?
- What are the implications for rural economic development planning?
Method

- Case study of three rural counties with participation in Wisconsin’s Focus on Energy
- Economic impact of annual energy savings modeled with IMPLAN™
- Measures:
  - Percentage change in the economy
  - Rate of economic impact
  - Employment and Total Income
- Evaluate significance for these rural economies
Distribution of Achieved Energy Savings

County Average Annual Savings: $134,547

- Households: 40%
- Public Education: 20%
- Government: 10%
- Service: 5%
- Retail Trade: 5%
- Wholesale Trade: 10%
- Manufacturing: 10%
- Agriculture: 5%

% of Total Annual Savings
Economic Impacts from Achieved Energy Savings

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<tr>
<th></th>
<th>Clark</th>
<th>Green</th>
<th>Polk</th>
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<tr>
<td>Employment*</td>
<td>1.4</td>
<td>1.6</td>
<td>2.1</td>
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<tr>
<td>Total Income*</td>
<td>$53,000</td>
<td>$55,000</td>
<td>$76,000</td>
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<tr>
<td>Change in Total Income</td>
<td>0.010%</td>
<td>0.013%</td>
<td>0.010%</td>
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*Impacts per $100,000 in annual energy bill savings
Industries Affected – Achieved Savings

Change in Total Income (Value Added)

- Public Education
- Government
- Services
- FIRE
- Retail Trade
- Wholesale Trade
- TCPU
- Manufacturing
- Construction
- Mining
- Agriculture

0.000% 0.010% 0.020% 0.030% 0.040%
Estimated Potential Energy Savings

- Assumed savings of 5 percent of current energy consumption
- Consistent with other program achievements
- Based on per employee energy intensity
Distribution of Potential Energy Savings

County Average Annual Savings: $3.2 Million

- Households
- Wholesale Trade
- Retail Trade
- TCPU
- Services
- Public Education
- Manufacturing
- Government
- FIRE
- Agriculture

% of Total Annual Savings
Economic Impacts from Potential Energy Savings

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<tr>
<td>Employment*</td>
<td>1.4</td>
<td>2</td>
<td>1.5</td>
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<tr>
<td>Total Income*</td>
<td>$47,000</td>
<td>$69,000</td>
<td>$56,000</td>
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<td>Change in Total Income</td>
<td>0.220%</td>
<td>0.290%</td>
<td>0.270%</td>
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*Impacts per $100,000 in annual energy bill savings
Conclusions

Improved energy efficiency:

- Supports a variety of local firms and households
- Generates positive economic impacts
- Offers a relatively inexpensive economic development strategy for local governments and organizations
Suggestions for Future Research

- Account for all costs and benefits to rural counties
- Explore the policy trade-offs of investing in rural energy efficiency over urban areas
Acknowledgments

- PA Consulting Group
- Wisconsin Division of Energy
- Dr. Steve Deller, PhD
  University of Wisconsin- Madison