Major Findings

Job Creation: 85,700 new net jobs

Economic Development: $40.9 billion in new capital investment

Consumer Savings: $42.8 billion in lower electricity and natural gas bills

Diversified Energy Mix: 63,000 megawatts of renewable energy capacity

Climate Solution: Avoid global warming pollution from power plants equal to annual emissions from 30 typical coal plants

All Midwest states see benefits
Midwest currently powered mostly by coal...

Sources of Midwestern Electricity, 2009

Coal 68.3%
Natural gas 4.1%
Petroleum 0.4%
Other non-renewables 0.4%
Nuclear 21.5%
Renewables 5.3%
Hydro 1.5%
Biomass 0.9%
Wind 2.8%
Solar <0.1%

Source: EIA 2010
...largely imported from outside the region

$7.5\text{ billion}$
Midwest states have vast and diverse local untapped renewable resources

Source: NREL 2011
Midwest states have vast and diverse local untapped renewable resources

Midwestern Biomass Resources
Skilled labor force and strong manufacturing base
Large-scale wind component manufacturers

Source: NREL 2009
Wind component manufacturers in Ohio

Source: Ohio Department of Development

Union of Concerned Scientists
Significant energy efficiency opportunities
Energy efficiency is a low cost option

Average Midwest electricity price 8.2 c/kwh

Source: Adapted from Hurley et al 2008.
States should adopt the MGA Energy Roadmap Renewable Energy Targets

Energy Roadmap Target: 30% by 2030

- Renewable electricity standard for all utilities
- Renewable electricity standard for some utilities
- Voluntary renewable electricity goal
- Solar water heating eligible

Source: Adapted from dsireusa.org
States should adopt the MGA Energy Roadmap Energy Efficiency Targets

Energy Roadmap Target: 2% by 2015 and each year thereafter

Source: Adapted from dsireusa.org
Analysis methodology

Used a modified version of the EIA’s National Energy Modeling System and IMPLAN economics model

Source: PJM 2011a, 2011b
Economic benefits - Job Creation

85,000 jobs created

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Other economic benefits

• New capital investment: $40.9 billion
• Biomass payments: $610 million
• Wind land lease payments: $390 million
• Property tax revenues: 3.5 billion
Energy bill savings for families and businesses

Cumulative Consumer Savings on Energy Bills, 2010–2030

Residential Annual Consumer bill savings per state in 2020 and 2030

<table>
<thead>
<tr>
<th>State</th>
<th>2020</th>
<th>2030</th>
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<tr>
<td>IL</td>
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Renewable energy development

Renewable energy Mix in 2010 and 2030 with and without the Energy Roadmap targets.
More diversified electricity mix
Climate solution - a good first step

CO2 Emissions from Midwest Power Plants under various scenarios

- Existing Policies
- Energy Roadmap Targets
- Federal Carbon Reduction Policy
- Federal Policy with Energy Roadmap Targets

Year:
2010, 2015, 2020, 2025, 2030

Million tons of CO2 equivalent:
In Conclusion

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A call to action

• Help get the word about our report out in your state

• Contact your Governor to
  – Support strengthening clean energy policies
  – Oppose threats

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QUESTIONS?
References


