



Ecosystem Workforce Program

BRIEFING PAPER
NUMBER 76
SPRING 2017



THE EFFECT OF STATE AND FEDERAL POLICIES ON BIOMASS BUSINESS INVESTMENTS IN WISCONSIN

DENNIS BECKER, JESSE ABRAMS, EMILY FENSTER, JORDAN KUDRNA, TIMOTHY SMITH, and CASSANDRA MOSELEY

Wood-based biomass energy plays a key role in Wisconsin's wood products economy and in the state's commitment to renewable energy. The state has developed numerous policies and programs to support biomass energy harvesting, transportation, and production, and the federal government has implemented policies to support related business development. The research reported here investigates what policies have been most important in fostering biomass business investments in Wisconsin and in creating strategic opportunities along the biomass supply chain.

Biomass business survey

A total of 81 biomass harvest and transportation firms, wood-using utility companies, wood pellet and densified fuel producers, and institutional wood heat or electricity users were identified in Wisconsin. We surveyed 32 of these businesses in 2014 to understand the influence of state and federal policies on decisions to invest in wood energy production.

Surveyed businesses identified a total of 40 significant energy-related investments made between 1982 and 2014. These investments included:

- Installing new or upgraded biomass boilers
- Purchasing new harvesting, processing, and transportation equipment
- Designing new heating plants
- Converting to wood energy from other fuel sources
- Adding other technological, process, or market investments

Key findings

Over one-fourth of biomass investments were influenced by federal or state policies. Respondents said that eleven (28%) of the 40 investments made were

Wisconsin

- We identified identified **81 biomass firms** in the State of Washington (harvesters/haulers, wood energy producers, pellet producers, and institutional wood heat users).
- Of the biomass-related investments made, **28%** were influenced by policy.
- The state's **Focus on Energy** program was the policy most frequently identified as influential on business investment decisions.
- Wisconsin biomass representatives expressed concerns about the **deficient design** of existing federal policies and the **unintended consequences** of some biomass promotion policies.

explicitly influenced by public policies. Biomass harvesting and transportation firms identified the largest number of influential policies, followed by power and utility companies, institutional biomass users (such as hospitals and schools), and pellet producers. Market forces were the primary driver for the other 29 investments.

Financial disbursements and tax policies were deemed the most influential. For those investments influenced by state or federal policies, the most influential policies reported were financial disbursements (e.g., grants, loans, cost-share programs, and direct producer payments). The second most influential policies were tax-based policies (e.g., exemptions, allowances, deductions, and credits). This matches with our nationwide research showing that financial disbursement and tax policies were associated with increases in wood energy production across all states in the U.S.

Both state and federal policies were important.

Wisconsin's Focus on Energy program was the policy most frequently mentioned by responding businesses. This policy, since renamed Focus on Energy: Renewable Energy Cash Back Rewards, offers incentives for installing or expanding renewable energy systems in businesses and homes. Businesses reported that this program prompted new production processes and stimulated equipment upgrades, such as new wood-fired boilers. Another financial disbursement policy explicitly identified was the federal Biomass Crop Assistance Program, which provided funds to match payments to eligible material owners for the delivery of qualified feedstock to biomass conversion facilities. Businesses reported that this policy stimulated business expansion; for example, one firm was able to increase source material procurement, which allowed it to expand into the wood energy market. Businesses also identified a local loan program in Marathon County, which was enacted to disburse low-interest loans to help firms expand their businesses.

The only tax credit specifically mentioned was the United States Department of Agriculture's Advanced Biofuel Tax Credit, which targets producers of advanced biofuels. This credit prompted one pellet producer to investment in market research, product development, and brand visibility. Businesses also mentioned regulations implemented by the Occupational Safety and Health Administration as influencing biomass investment decisions. One business said the regulations prompted investment in the installation of explosion-proof technologies such as new ward gates, sensors, and dampeners. Another policy explicitly identified was the state Green Power Purchasing policy, which directs various Wisconsin agencies to purchase a portion of their energy from

renewable sources. This policy influenced process changes that allowed firms to increase the utilization of wood byproducts to produce energy.

Policy design may limit uptake. Respondents voiced some concerns regarding the design or implementation of individual policies and the interactions among policies. A common complaint was the unintended consequences of policies; for example, some felt that the Biomass Crop Assistance Program distorted the market in undesirable ways. Others complained that federal air quality standards worked against other state and federal policies promoting biomass energy generation. Some businesses felt that loan programs had overly complicated application requirements for uncertain and limited benefits. Others expressed frustration with policies whose funding levels or requirements changed abruptly, leaving potential beneficiaries feeling like they wasted their time applying.

Implications

The results from Wisconsin broadly match those from the other states in the study (California, Michigan, Minnesota, Oregon, and Washington):

- Financial disbursement and tax policies were reported to be the most influential on investments made. This is consistent with national analyses showing a relationship between increased wood energy use and state disbursement and tax policies.
- Market forces, rather than public policies, were the driving force behind most reported business investments.
- There were complaints raised with the design of existing state and federal policies and with the alignment of biomass promotion policies with other regulatory policies.

These findings point to the need to consider the suite of factors and policies, including many state and federal non-biomass regulatory policies, that affect the biomass energy sector. These findings also suggest the need for coordination of state and federal policies across supply chains and jurisdictions, and to consider the unique needs of Wisconsin's diverse biomass supply chain participants.

More information

For more information on specific state renewable energy policies, please visit:

<http://woodenergyproject.com/StatePolicies/>

This project was supported by Agriculture and Food Research Initiative Competitive Grant no. 2013-67009-20396 from the USDA National Institute of Food and Agriculture. Header photo by Marcus Kauffman, Oregon Department of Forestry.