



Ecosystem Workforce Program

BRIEFING PAPER
NUMBER 73
SPRING 2017



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

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Wood-based biomass energy plays a key role in Minnesota'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 Minnesota and in creating strategic opportunities along the biomass supply chain.

Biomass business survey

A total of 82 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 Minnesota. We surveyed 35 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 44 significant energy-related investments made between 1979 and 2014. These investments included:

- Installing new or upgraded boilers
- Purchasing new harvesting and transportation equipment
- Increasing system energy efficiency
- Utilizing new types of wood byproducts to produce energy
- Adding other technological and process-oriented investments

Key findings

One-fourth of biomass investments were influenced by federal or state policies. Respondents said that eleven (25%) of the 44 significant investments made

Minnesota

- We identified identified **82 biomass firms** in the State of Minnesota (harvesters/haulers, wood energy producers, pellet producers, and institutional wood heat users).
- Of the biomass-related investments made, **25%** were influenced by policy.
- The **Biomass Crop Assistance Program** was the policy most frequently identified as influential on business investment decisions.
- Minnesota biomass representatives expressed concerns about the **applicability of policies** to respondents' businesses, and the **unintended consequences** of some biomass promotion policies.

were explicitly influenced by public policies. Power and utility companies identified the largest number of influential policies, followed by businesses involved in biomass harvesting and transportation, institutional biomass users (such as hospitals and schools), and one pellet producer. Market forces were the primary influence on the other 33 investments.

Financial disbursements and tax policies were deemed the most influential. For those investments influenced by state or federal policy, the most influential policies reported were financial disbursements (e.g., grants, loans, cost-share programs, and direct payments). The second most influential policies were tax 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. The federal Biomass Crop Assistance Program was the policy most frequently mentioned by responding businesses. This policy 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 equipment upgrades, such as the purchase of a new boiler, and increased overall usage of wood byproducts to produce energy. Those who participated in the program expressed generally positive experiences.

Minnesota biomass firms also took advantage of tax policies. The only tax credit specifically named by respondents was the Black Liquor Tax credit, a program that expired in 2009. Black liquor, a by-product of papermaking, is often utilized by paper manufacturers for processing heat or electricity. One business reported substantial financial gain and reinvestment back into biomass and renewable energy development as a result of this credit. Another policy explicitly identified was the state Next Generation Energy Act, which is a regulatory policy that mandates utility companies in the state to generate at least 25% of their power from renewable sources by 2025 (30% for Xcel Energy). This policy drove one business to invest in the reconstruction of its fuel handling system to dry biomass material onsite. The change ultimately resulted in lowered costs for the firm.

Policy design may limit uptake. Respondents voiced a number of concerns regarding the design

or implementation of individual policies. A common complaint was that policies had unintended consequences; for example, some respondents felt that state and federal tax credits privileged wind and solar energy production over biomass, putting them at a competitive disadvantage. Similarly, some businesses complained that the Biomass Crop Assistance Program benefited some actors of the supply chain to the detriment of others. Others felt that policies had narrowly defined provisions that excluded wood energy production from receiving incentives. However, not all businesses or users expressed negative views. Those who received some form of financial support for biomass production expressed generally positive experiences.

Implications

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

- Market forces, rather than public policies, were the driving force behind more reported business investments. However, policies were said to have been influential in 25% of identified investments.
- Minnesota biomass firms reported both state and federal policies as influencing biomass production and investments.
- Minnesota businesses that utilized financial disbursement and tax policies had generally positive experiences.

These findings point to the need to consider the suite of 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 Minnesota'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.