**PROJECT NAME**
Developing a Business Case for Sustainable Biomass Generation

**ALIGNMENT WITH THEORY OF CHANGE**
Value Streams

**INITIATIVE**
Wood-to-Energy

**TYPE OF PROJECT**
Knowledge R&D

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**FUNDING**

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**AWARDEES**
Montana Community Development Corporation

**CHRONOLOGY**

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**Project Overviews & Outcomes**

The “Developing a Business Case for Sustainable Biomass Generation: A Regional Model for Western Montana” report explores the feasibility of developing sustainable, woody biomass-fueled Combined Heat and Power (CHP) plants at sawmills in western Montana to supply a portion of North Western Energy's (NWE) required renewable energy portfolio.

The major items addressed in the feasibility study include identifying the:
- Supply and cost of biomass fuel
- Appropriate size and technology for western Montana sawmill CHP plants.
- Economics of CHP plants at western Montana sawmills
- Possible obstacles to sawmill CHP plants (e.g. environmental permitting, water use, interconnection and transmission, and ash disposal).
- Available renewable power incentive programs
- The potential markets for renewable power
- Economic and environmental benefits of sawmill CHP plants.

The resulting consolidated statewide business plan allows all parties to finalize investment plans and construct plants, creates much-needed jobs in both energy and timber manufacturing, and increase Montana’s renewable power while providing an economic use for excess wood from forest treatments that reduce wildfire risk and improve forest health.

The advantage of siting CHP plants at sawmills rather than developing large, stand-alone biomass power facilities is that sawmills offer: an existing industrial site, air and water permits, and interconnection to the power grid; an industrial process heat demand; experience procuring and moving biomass; experienced boiler operators; and substantial volumes of on-site fuel. Also, sawmill CHP plants can increase the long-term viability of Montana’s sawmills by stabilizing the value of mill residues and providing mill owners with predictable income from the sale of renewable power.