

Transforming Wood Products to Renewable Energy

Converting a former lumber mill to a biomass plant in Crescent Mills, California



Project Summary

Community: Crescent Mills, California

Technical Assistance: Economic Analysis

Former Use: Lumber Mill

Future Use: Biomass Renewable Energy

Historic lumber mill operations left a Crescent Mills site in northern California blighted with soil contamination. However, the Sierra Institute for Community and Environment aims to transform this brownfield site into a wood products campus and biomass power facility with a capacity up to 3 megawatts.

The Sierra Institute seeks to generate renewable electricity and thermal outputs for the community at an appropriate rate of return, stimulate employment related to wood products in the area, and help improve the health of the forest in the Sierra Nevada mountains. Implementing their vision will help revitalize job growth in the area and generate renewable energy outside of the typical solar and wind industry.

The Community's Challenge

Beyond executing a long-term electricity sales contract, there are many challenges associated with implementing a biomass facility. For the plant and its co-located businesses to be successful, the Sierra Institute first needed specific information about the regional market and price points for biomass products.

EPA's Land Revitalization Technical Assistance

EPA's Land Revitalization Program provided contractor assistance to develop an economic and market assessment report for the proposed facility. The report identifies viable co-located business types that could

expand and diversify site redevelopment income derived from the biomass plant by-products and location (heat, mid- to high-quality timber, proximity to electrical grid, etc.), local labor market characteristics related to staffing needs of the biomass plant, feedstock contract best practices, and public-private partnership opportunities related to the plant.

Technical assistance provided by EPA will support the successful development and long-term plan for the Crescent Mills facility. It also serves as guidance to a broad network of similarly planned bioenergy facilities in California.

Best Practices to Pursue	What to Avoid
Do include contract mechanisms about changing pricing based on real changes in supplier costs.	Don't allow biomass deliveries of chips outside of specified minimum and maximum size ranges.
Do maintain suitable stockpiles of feedstock to allow for winter and mud season supply difficulties.	Don't allow delivery of wood chips that have been intentionally watered to increase their weight.
Do manage chip stockpiles on a first-in, first-out basis.	Don't allow excessively dirty round wood to be delivered.
Do have a qualified forester visit with the suppliers, see their source of biomass, and develop sustainable harvesting plans.	Don't allow deliveries of chips or round wood without careful inspection before acceptance.

Feedstock supply: best practices and what to avoid

For more information, contact Eric Byous, EPA Region 9 Brownfields Program, at Byous.Eric@epa.gov.