Biomass Utilization in the Central Sierra and Northern California

March 24, 2025 Workshop Summary

Overview

The hybrid meeting focused on a state-funded program designed to address barriers to biomass utilization in the Central Sierra counties of Alpine, Amador, Calaveras, Tuolumne, and Mariposa , focusing on strategies for sustainable biomass use, economic opportunities, and collaborative governance models. Key topics included biomass feedstock availability, workforce challenges, geospatial analyses for facility siting, governance models like Joint Powers Authorities (JPAs), and the integration of digital tools for biomass procurement. The workshop emphasized the importance of local infrastructure, community engagement, and innovative solutions to bolster forest health, reduce wildfire risks, and create jobs.

Introduction and Project Overview

- Stacy Corless introduced the workshop on biomass utilization in the Central Sierra.
- Tuolumne County Supervisor Jaron Brandon welcomed participants, emphasizing regional planning and the interconnectedness between rural areas and urban centers regarding resources and environmental impacts.
- John Carrier from Mariposa County Resource Conservation District explained their role as grantor for a state-funded project investigating JPAs.
- Michael McGuire from the Governor's Office of Land and Climate Innovation presented the Woody Feedstock Aggregation Pilot Program (CAL-FRAME), derived from the Wildfire and Forest Resilience Action Plan with $7 million deployed across 18 counties.

Feedstock Supply Study Findings

- Tad Mason from TSS Consultants analyzed biomass feedstock availability in Alpine, Amador, Calaveras, Tuolumne, and Mariposa counties (2.4 million acres of forest land).
    - Ownership: 52% private land; 48% government land.
    - Biomass sources: 51,000 bone dry tons/year from timber harvest; 62,000 from fuels reduction; 154,000 from sawmills; 17,000 from urban wood waste.
- Workforce barriers included inconsistent project flow, seasonality, federal bid complexity, equipment costs, and recruitment challenges.
- Opportunities for workforce growth: community college training programs, longer-term contracts, and improved worker compensation.

Supply Chain Optimization Analysis

- David Featherman from Wildephor Consulting presented geospatial analyses for siting facilities
    - Biomass availability within two-hour drive times ranged from 200,000 to 600,000 bone dry tons annually.

        - Greenhouse gas impacts from trucking were estimated at 1,200–4,000 metric tons of CO_2 emissions annually depending on site location.
- Financial risk analysis models are being developed to simulate project outcomes.

Governance Models

- Christiana Darlington from CLERE Inc. discussed JPAs as collaborative governance models:
    - JPAs enable local governments to pool resources while gaining bonding authority.
    - Four value propositions: insurance assistance, environmental compliance, local biomass initiatives, technical support.
- Diana Pietri from ERG presented financial analysis and findings from ERG's Organizaitonal Study recommending a phased approach to forming a JPA governance structure:
    - Initial state grant funding transitioning to a fees-for-service model.
    - Lean staffing model with one full-time executive director supported by contracted consultants.

Workforce Development and Economic Impact

- Alex Bloom highlighted biomass utilization as an untapped economic asset:
    - Strategic use reduces wildfire risks while supporting clean energy goals.
    - Diverse job opportunities exist across forest management, logistics, processing, and manufacturing.
    - Focus on creating "high road" jobs that are well-paying and family-sustaining.
- Partnerships like Motherlode Job Training and Columbia College have created initiatives such as the Greater Sierra Forestry Corps

Digital Marketplace Integration

- Michael introduced a Digital Marketplace concept modeled like dating platforms for biomass procurement:
    - Connects small landowners with service providers using tools like CBREC models.
    - Features include property assessment tools before site visits and a Forest Industry Directory similar to Oregon's model.
- Approximately $1.5 million has been invested in developing this marketplace.

Case Study: Upper Mokelumne River Watershed Authority (UMRWA)

- Richard Sykes presented UMRWA as a successful JPA example:
    - Formed in 2000 with three counties and eight water agencies to protect water supply/quality.
    - Operates with part-time staff supported by member agency resources.
    - Implemented a Good Neighbor Agreement with the US Forest Service in 2016.
    - Currently managing grants worth $18–20 million for wildfire prevention projects.

Business Model Challenges

- Persistent challenges include adding value to biomass or reducing extraction costs for economic viability.
- Carbon credits were discussed as potential added value to biomass projects.
- Debate ensued over whether public funding would always be necessary for industry sustainability.

Community Impact and Next Steps

- Mariposa County Supervisor Rosemarie Smallcombe emphasized developing local biomass infrastructure to achieve economies of scale critical for forest health and job creation.
- Participants discussed defining biomass residual standards (e.g., SB88) and improving public communication about biomass goals.

Action Items

Workshop Organizers:

- Share presentations and studies referenced during the webinar.
- Continue discussions with Central Sierra Economic Development District board/staff over next few months regarding CSEDD’s potential role.

Participants:

- Review SB88 standards regarding biomass residuals.
- Engage in natural working lands industry working groups (April event).

Michael:

- Launch beta version of Digital Marketplace website for interested parties.