



Biomass Utilization Feasibility Study for Mono County

Monthly Progress Report # 3

Date: September 5, 2013

Report Period: August 1 to August 31, 2013

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Introduction: This monthly progress report provides Mono County and other interested parties with an update on activities conducted in support of the biomass utilization feasibility study.

Project Activities:

- Continued biomass feedstock availability and cost analysis.
- Continued facility site selection analysis.
- Delivered recommendations regarding comments on the Inyo National Forest Plan.
- Conducted August Conference Call on 8/19. Call notes are enclosed.

Highlights of Projected Activities planned for the next 30 days:

- Complete biomass feedstock availability and cost analysis.
- Complete facility site selection process.
- Update contract for services to include modified Scope of Work (adjusted to address thermal energy project).
- Develop a FAQ document for biomass thermal projects.
- Conduct Monthly Conference Call 1 - 2:30pm on Sept 23.



Biomass Utilization Feasibility Study for Mono County

August 19, 2013 Meeting

Meeting Date/Time: August 19, 2013, 1pm to 2:30pm

Meeting Location: Via Conference Call

Call Coordinates: Call in: 712.432.0075 PC: 264594#

Participants:

Wendy Sugimura

Dan Lyster

Elissa Brown

Tedi Duree

Dana Stroud

Steve McCabe

Larry Johnston

Byng Hunt

Greg Cook

Fred Tornatore

Matt Hart

Tad Mason

Meeting Notes

- Review agenda
 - No additions at the beginning of the meeting.
- Task 5 Biomass Feedstock Availability Initial findings
 - The volume of biomass is appropriate for a smaller-scale project
 - The feedstock sourcing area radius was expanded to 50 miles from 30 to 40 miles.
 - Primary Feedstock Challenges:
 - The crest of the Sierra Nevada is due west of Mammoth Lakes which results in challenging transportation logistics.
 - The focus was to the east, north, and south of Mammoth Lakes
 - Initial Findings - 2,500 to 4,000 BDT/yr
 - Much of this availability is generated at Benton Crossing landfill (almost 2,000 BDT/yr) – Tony Dublino was the primary contact for the Solid Waste Dept.
 - Still waiting for some information from the Humboldt-Toiyabe National Forest which may result in some additional availability.
 - Recommendation is to consider into a thermal energy project.



- Questions:
 - What about the blowdown and the tree kill? (Larry)
 - TSS considers these episodic events and unpredictable, therefore are not sustainable sources of predictable feedstock.
 - For the forest service information, who are the sources? (Greg)
 - Scott Kusumoto
 - Sue Farley
 - Annamaria Echeverria
 - Mandy Brinnand
 - Greg noted that TSS might want to Dale Johnson. Tad will reach out to Dale.
 - What is the tipping point for CHP? (Greg)
 - The tipping point is approximately 8,000-10,000 BDT/yr for a 1 MW unit
 - Approximately how much is available from just the USFS?
 - 1,200 to 1,400 BDT/year (initial findings from the Inyo NF). Still working to secure figures from the Humboldt-Toiyabe NF.
 - While there is more out there, some of it is not economically available.
 - How has TSS accounted for sales that are not purchased?
 - TSS used a target of 4,000 ccf/yr for the Inyo and TSS are using that value for its baseline calculations
 - Elissa indicated support for thermal projects and asked Tad to discuss the advantages and disadvantages for thermal projects vs. combined heat and power (CHP).
 - TSS finds wood thermal units to be very economically sound projects particularly when displacing propane.
 - The interconnection into an existing hot water or steam system is relatively simple compared to CHP.
 - Permitting can be relatively simple too.
 - The primary downside is that it does not use as much feedstock as a CHP project (for areas with lots of feedstock availability).
 - The beetle kill was a spike in the San Bernardino and it would be helpful to illustrate what is excluded from the sustainable harvest yield. (Tedi)
 - Will the USFS respond to outside input to increase biomass availability?
 - There have been discussions with the USFS about long-term stewardship contracts. And the upcoming Inyo NF Land Management Plan update.
 - TSS is focused on the historic land management levels over 5 years and the forecasts 5 years forward.



- Task 2 Identify Potential Sites
 - Looking to see if there are other opportunities for thermal project sites:
 - Community College
 - Hospital
 - School district
 - Mammoth Mountain
 - Discussion about alternative sites for winter storage:
 - Benton Crossing (possibly not the strongest candidate because it is further away and might close in 2023)
 - Near the airport (cement slab)
 - Former sheriff's substation
 - On the Mammoth Mountain property, somewhere near an old lift
- Task 3 Current Body of Knowledge
 - Clarifications that this should not focus as much on a literature search because biomass thermal applications are significantly more common than CHP applications.
 - See the revised scope of work for the new allocation of funds.
- Other Discussion Items?
 - There is a current, ongoing process to update the forest management plan. Can TSS provide some technical recommendations?
 - September 1 is the deadline
- Action Items:
 - Greg and Tad to further discuss additional biomass availability.
 - TSS to continue outreach on the available biomass feedstock
 - Tad to contact Dale Johnson
 - Tad to generate recommendations for the Inyo NF plan update (by 8/26).
 - TSS to finalize the Task 2 matrix
 - Wendy to send contacts for the Community College and Hospital
 - Wendy to update TSS/Mono County contract for services with the updated Scope of Work (suggested edits provided by TSS).
- Confirm September Meeting Date/Time - 1 - 2:30pm, Sept, 23
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