

Meeting Notes | Eastern Fresno County Bioenergy Feasibility Study

Pre-Feasibility Informational Meeting

May 22, 2014

6:30 pm – 8:00 pm

Welcome/Opening Remarks

Steve Haze, Sierra Resource Conservation District

- Sierra Resource Conservation District(Sierra RCD) works in the Eastern Fresno County area
- Board members live in our area, and we deal with issues like range land management, invasive species, restoration, and education
- This is an opportunity for you to ask any questions you may have related to the health of our forest, biomass, what will it mean for jobs, impacts from catastrophic fire, how this relates to natural resources
- Biomass issues started a 12 years ago, when there was a conference in Visalia
- When mills closed we lost a lot of jobs
- Recently we have seen a lot of progress made related to our forest, protecting our foothill and mountain communities, and increasing our economic benefit
- North Fork community worked on this project together and developed it – they have obtained a conditional use permit from Madera County Board of Supervisors
 - Started with the cleanup of a brownfield in North Fork
 - Now we are in phase 5 of financing and construction
 - Sierra RCD will be supporting North Fork as they go into construction phase
- This is the initiation of a feasibility study, and we want the public to provide feedback and be involved in the process
- Q: Will you get everything out of the forest?
 - Some amount of material that may or may not be removed
 - Concerns about the forest being shut down due to yellow legged frog and Yosemite toad
- Q: Where is North Fork Mill?
 - The old mill site
- Q: Frame the context of biomass utilization? What is it's purpose in the community?

Meeting Format and Agenda Review

Jodie Monaghan, Center For Collaborative Policy

- The facilitator went over the meeting format and reviewed the evening's agenda
- Goal of this meeting is to make sure that you get all of your questions answered

- If we cannot answer them tonight, we will make sure we answer them in a subsequent meeting

Community Scale Bioenergy Utilization in California

Elissa Brown, Sierra Nevada Conservancy

- In development means there are people in the area interested in exploring a bioenergy facility
- So why forest bioenergy?
 - Forests are overstocked with fuel, and the fuel that needs to be removed is largely the small diameter trees
 - Large diameter trees have the timber value, which frequently pays for the other restoration, because small diameter timber does not make money or loses money
- Biomass facilities offset these losses and put more money
- SNC wants to redevelop a forest bioenergy industry
- Bioenergy is not the only way to use biomass, but it uses a lot of it and it is a large stable product because it gets power purchasing agreement
 - Kind of like Macy's in a shopping mall – big and it's always going to be there, even if boutiques come and go
- Over 50 mill sites in CA have closed over the last 20 years
- We want to re-establish the biomass industries, which sounds good but it's challenging because this is new plants, new technology, and is not a big money maker
- Main product is electricity, and communities can make money by selling it to power utilities
- State has passed new policies because they want to support renewable energy, including forest bioenergy facilities
- Created an auction to set the price that only includes forest bioenergy facilities – starting auction price of 12.4 cents
- Local community benefit and public benefit for the whole state – water, transmission lines, etc.
- SB1122
 - There is support for community scale bioenergy – SNC brings communities together and funds them
- North Fork Biomass Facility
 - Lot of community work and support went into the North Fork facility
 - North Fork is your pioneer/trailblazer representative of the progress
 - Community Development Council owns it and uses the proceeds, hopes to promote the co-location of businesses nearby
- Development process

- Starts from the community, it does not start from businesses
- Community organizations do a feasibility assessment by convening stakeholders
- Feasibility studies cost about \$50,000 but there are grant funds available
- Once you've done the feasibility study, then choose a developer for design and engineering
- Questions
 - Q: Would you be working with a local developers and local contractors?
 - If locals have the experience or technology
 - If on National Forest, then we can work with them on getting contracts
 - Q: Noise and smell impacts
 - Minimal
 - Q: distribution lines?
 - Any power distributed from the plant would be to co-located businesses - you can buy from the site, but just off-site it doesn't work
 - Private owners can purchase power from a solar array/farm but the same system can't be applied to bioenergy in the form we are discussing currently
 - Q: purchasing power outside of the utility models?
 - Q: Who directed the steering committee in North Fork?
 - Site owner, the community development council, with a board of community organization members
 - But North Fork is and has always been community driven
 - Q: Who is directing the steering committee here?
 - Currently Sierra Resource Conservation District, with support from Sustainable Forests and Communities Collaborative
 - Q: is there a way to make our own power and be energy independent?
 - Form a municipal utility district, or you can form a community choice aggregation
 - Once you form a group, it is sort of like buying insurance, and you can buy at a cheaper rate and chose your resources
 - Want energy that is cheap and reliable
 - Q: Land with the biomass resources is owned and managed by the Forest Service and by Southern California Edison
 - One of the things you look at in a feasibility study is what do local land managers have planned
 - We can negotiate contracts to provide biomass, the North Fork project is again an example of how we can proceed.

Forest Bioenergy – An Introduction

Tad Mason, TSS Consultants

- Biomass may eventually be converted into liquid biomass fuels, but that technology is many years away
- In the meantime, bioenergy facilities create power, heat, and biochar
- Not dependent on wind and sun, and very dependable since it turns waste product into energy
- Air quality benefits – no uncontrolled combustion, so less air impacts, as opposed to piling and burning
- These also create dependable family wage jobs
- Healthy forests (handout pg. 12, 2nd slide)
 - Red zones are forested ecosystems that are at extreme risk to wildfire
 - We have missed so many fire return intervals, which creates a lot of fuel build up
- There is anecdotal and growing scientific evidence that thinning can reduce fire risk
- Placer county air district
 - Monitored the emissions from the power plant with open pile burning
- Q: will you buy a burn pile?
 - This may be part of the plan, providing chipping services or disposal
- Q: biomass at lower elevation(2,000-4,000) may have a lower cost?
 - Brushing is challenging to work with, maybe use a baler, but they are costly
 - Oak trees are useable, other hardwoods are challenging/costly
- Also looking at agriculture fuels as well – orchard trimming, tree trimmings, etc.
- CA counties are mandated to divert 50% of their waste away from landfills, like Fresno's biomass facility
- Need to meet a new standard for biomass disposal
- Q: Impacts of the yellow legged frog and Yosemite toad endangered listing?
 - We don't anticipate any major impacts to biomass harvesting, this is not on the same level as the spotted owl impacts of a few years ago
- We Look at historic levels of biomass availability to forecast forward and determine what is sustainably available considering existing environmental compliance requirements
- Placer County - 2 MW project near Truckee – region that you can cover with a one hour haul radius
- Feedstock needs to be environmentally and economically available
- Banks want a 10 year secure supply, and 3x the amount of biomass than you really need
- Knowing the feedstock allows you to choose your technology
- Types of technology
 - Combustion plants – combustion of biomass creates heat, uses heat to convert water into steam which turns a turbine and creates power
 - Gasification – introducing chips 3 inches and smaller, fairly dry 20-25% moisture, into a reactor or vessel at very high heat without oxygen(no combustion)

- Changes the chips from a solid to a gas(hydrogen and methane), clean up the gas, apply it to a generator
 - Biochar and syngas properties
 - Need to just get it kick started, and then it generates its own heat from the products
 - Ex: the one in Merced owned by phoenix
 - This produces syngas and biochar
- Q: Noise and odor concerns?
 - Chips will be stored, so there will be a wood smell, there will not be smell from the plant
 - 80 – 85 decibels 200ft away
- Q: number of jobs?
 - In the plant, 5 per jobs
 - So 5-8 in one MW site
- Q: So we could potentially scale up?
 - Yes
- 2 truckloads of chips per day, though there may be more as the woods are open or action is occurring
- Loader also operating on-site
- Biochar
 - Major product from gasification; sought after soil amendment for carbon fixation
 - Up to 60% per pound
- Potential sites
 - Auberry mill site – 65 acres, PG&E substation closely located, as well as transmission feed line, zoned for business, and part of the beautification initiative in Fresno
 - New plant would be smaller than the old cogeneration plant that is there now
 - Former landfill in Shaver Lake Area
 - Also historic mill site in Shaver Lake
 - Southern California Edison – Rich Bagley
 - On the north east side off of 168 they have a hydroelectric substation, so that is another potential opportunity
 - Feedstock from the private forest is regardless
 - Sierra High School – Welden farm area
 - Small scale biomass facility offering career opportunities or training programs
- We want to hear about other sites
 - 168 corridor as near to it as possible is ideal
 - Could even have multiple final sites

Site Selection and Consideration

Tad Mason, TSS Consultants and Steve Haze, Sierra RCD

- There are different considerations required for the sites, identified in a matrix
- Zoning, road access, infrastructure, room, proximity to residences, community support
- If the community does not support it, it's not a project
- Highway 168 FireSafe Council and Southern California Edison are supportive
- Looking for maximum community involvement
- Q: does the old mill have the only good enough water source?
 - The process doesn't require much water
- C: This community is built on the forest, and we should revive the mill, and is there any way that we can move this process forward in a more streamlined way
 - Not at this time, need wide community support
- Q: is there a comparable plant that we could go see?
 - Mariposa Biomass Project (<http://mariposabiomassproject.org/index.html>) is planning a field trip to the Merced plant owned by phoenix energy, we will send out information about that
 - We can also work on organizing a field trip for Auberry residents in coordination with the Friends of the Auberry Library
 - Phoenix energy is the developer for North Fork

Next Steps

Jodie Monaghan, Center for Collaborative Policy, and Steve Haze, Sierra RCD

- State Wood Energy Team applied for grant money for four bionenergy feasibility projects, including Auberry
- Sierra Resource Conservation District has a certain amount of funding to go toward a full feasibility study
- We may think that the Auberry mill site is a good choice, but we have to make sure we have looked at all our options for when we apply for funding for grants, and when we go to developers
- Remediation of dump sites may have better opportunities, or it may be better to locate it near the school for training opportunities
- Feasibility gives us a chance to really explore all of our options
- We will make the full slides available
- We are available for you to contact
- Within 45 days we will be convening our first session and conferring with the Forest Service to get the District Ranger to attend to show their support

- Dinkey Landscape Restoration Project is very important to this process
 - Next DLRP meeting on July 28th at the High Sierra Ranger District Office
- North Fork provides us a model to work off of if we want
- Participants should get involved with the forest plan revision process – public meeting in Fresno on June 16 at the Holiday Inn Fresno Airport, 5090 E. Clinton Fresno
- Tom Katchpole: this isn't something new to this area, we've had chipping and biomass thinning in the area before, we can do it again