

TAHOE REGIONAL PLANNING AGENCY
FOREST HEALTH AND WILDFIRE COMMITTEE

TRPA/Zoom

November 16, 2022

Meeting Minutes

CALL TO ORDER AND DETERMINATION OF QUORUM

Chair Mr. Hicks called the meeting to order at 11:10 a.m.

Members present: Ms. Conrad-Saydah, Mr. Hicks, Ms. Novasel, Mr. Rice, Ms. Williamson

I. APPROVAL OF AGENDA

Ms. Ambler stated no changes to the agenda.

Mr. Hicks deemed the agenda as posted

II. APPROVAL OF MINUTES

Mr. Hicks moved approval of the November 17, 2022 minutes.

Motion carried – voice vote

III. Presentation on On-Site Biomass Energy Unit to be proposed at South Tahoe Refuse

[Forest Health and Wildfire Committee](#)

TRPA Forest Health Program Manager, Dr. Kat McIntyre was joined by Jeff Tillman (South Tahoe Refuse), and Meagan Hartman (Wisewood Energy) to present the item.

Dr. McIntyre said that forests today are at risk for a variety of reasons. There has been a fire a century of fire suppression, paired with commercial harvesting of the largest trees that has left our forests homogeneous, and overstocked with small diameter trees and lots of ladder fuel. Many of the forests, particularly in the Sierra Nevada, lack the resilience to survive the natural disturbances that they had been living with for centuries, including things like insects, disease, and drought, and this is being exacerbated by climate change.

Slide 7 of the presentation shows a basic diagram of a healthy forest versus an unhealthy forest, and slide 8 illustrates the Historical versus Current Trees per Hectare for multiple sites in the Sierra Nevada, and shows that overall there are anywhere between 3 to 5 times as many trees today than there were historically. So, we are dealing with heavily overstocked forest in the region.

The first image on slide 9 shows maps of wildfire across the State of California through the decades from the 1970's. The image shows that we're having more fires, and they're getting bigger. In the 1970's there were few fires of average size, and now we are seeing mega fires burning across our landscape. This is all being exacerbated by climate change.

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The last diagram on slide 9 illustrates the largest California wildfires, and shows that three quarters of our largest fires have occurred within the past 5 years. And so we're dealing with a huge issue in the State of California.

Locally, the Angora fire burned through in 2007, burning approximately 3,100 acres and 254 structures in homes. The Angora fire was the impetus to bring the Tahoe Fire and Fuels Team together, and to work together on a multi-jurisdictional wildland fire strategy together, and to increase pace and work around the basin.

Dr. McIntyre said we have made great strides since then, and have treated approximately 89,000 acres in the basin, but as we saw last year with the Caldor fire, climate change is coming, and we are seeing it faster than ever. The Caldor fire was one of two fires in recorded history that crossed the Sierra crest (the other being the Dixie). This reinforces the critical nature of the work that we're trying to get done in the basin around forest health and wildfire risk.

Dr. McIntyre provided some background on biomass in the basin. She said that in 2010, NV Energy proposed a 2MW (two megawatt) commercial-sized biomass facility in Kings Beach. Biomass refers to taking green waste, logs, or limbs, and then chipping them and using them for energy production. Almost immediately, concerns were raised around air quality, noise, traffic, proximity to community services, such as schools and a boys and girls club. Protesters came to the TRPA, and it became very clear that there was not a palate at the time for biomass energy production in the basin. As a result, the 2012 Regional Plan Update included code language to prohibit the acceptance of applications for these types of facilities.

Slide 12 details the code language:

“Chapter 65.1 F. Biofuel facilities

TRPA shall suspend acceptance of applications for biofuel facilities until further research demonstrates the safety and environmental compatibility of such facilities.”

Dr. McIntyre said it is important to note that the Code does not expand upon what the research looks like, or who can lift the prohibition.

Further, the Code defines Biofuel Facilities as, “facilities that combust or gasifies forest and or plant, materials in a manner that, in combination with other systems generates electrical energy for use of distribution, or generates heat for distribution within a building or facility.”

Dr. McIntyre said this language has really hamstrung what they can and cannot even see as an agency. So staff came together to brainstorm, and felt that if Wisewood Energy and South Tahoe Refuse provide the appropriate information, showing the environmental health and safety compatibility of a potential facility, that information had the potential to be sufficient to allow a one-time acceptance of an application.

Meagan Hartman, Director of Business Development, Wisewood Energy, thanked Dr. McIntyre for presenting the broader context. Ms. Hartman said the Wisewood Energy have been supporting South Tahoe Refuse in exploring this opportunity. Ms. Hartman advised that Andrew Hayden, President of Wisewood Energy was also attending the meeting via zoom.

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South Tahoe Refuse (STR) is exploring a small-scale net metered wood energy system that will offset grid electricity and natural gas used at their site in South Lake Tahoe. The proposed system will use about 10% of the annual waste woody material already received, processed, and transported out of the Tahoe Basin by STR. In 2012 a pause was instituted on accepting applications for all new biomass energy facilities in the Tahoe Basin, in response to the 2 MW power plant proposed at Kings Beach. STR is seeking a TRPA decision to lift the moratorium for this pilot project, which would allow STR to proceed with a standard permitting process.

Ms. Hartman handed over to Mr. Jeff Tillman of South Tahoe Refuse to provide a little history on South Tahoe Refuse (STR). He said their family-owned company came to Tahoe in 1962, and have franchise agreements with Douglas County City, South Lake Tahoe, and El Dorado County. They opened and began operation of their Transfer Station in 1971 to start transporting to material out of the basin. The Transfer Station is currently located on 8 acres, and processes up to 370 tons of material per day. STR also has a Material Recovery Facility to sort through the solid waste to get the recycles out, a Buy Back Center, and a Resource Recovery Facility where they take in all the organics.

Mr. Tillman said they are proud of their overall diversion rate (refuse not going to landfills) of between 60 and 65%. They feel they can increase that number in the coming years and that is one of the things they're focusing on

Referring to slide 19, Ms. Hartman said she would like to frame wood energy in the context of different scales of technology. She said that some committee members may be aware that there is quite a range of applications and technology options to generate energy out of woody materials. Whether it's generating just heat, and/or generating electricity. Energy can be generated at a very small scale such as a home wood heater or fireplace, but when they're talking more commercial, just providing space heating at a single building with a boiler, is pretty small scale on the heating side, and then can be much larger when generating process heating or steam for more of an industrial application.

Ms. Hartman said that when you're generating electricity, smaller scale application examples would include net metering, which is what's being proposed for South Tahoe Refuse, where you're offsetting a single buildings energy usage, up to power export from a power plant where there are many different scales. Those power plants can be quite large and tend to be what most people are familiar with when they hear about wood energy or biomass.

Ms. Hartman said that what South Tahoe Refuse (STR) are proposing is a small-scale system net metered CHP (combined heat and power) gasifier. The gasifier is the technology that would be used. Net metering means that it would be offsetting the energy used on site at South Tahoe Reuse (STR), there will not be any power sales to the grid (like a power plant).

Ms. Hartman said gasifiers are often described as an energy resilience tool, similar to a conventional diesel or natural gas generator, but unlike diesel and natural gas generators, this is a renewable source. And instead of just being an emergency backup, they can be the primary source of energy for a facility because they provide 24/7 energy generation, versus something like solar that is intermittent based on resource availability. That makes a gasifier CHP (combined heat and power) technology valuable as an energy resilience tool for critical facilities where independence from the grid, or shoring up the risk of grid outages is really important. Gasification is different from combustion – the woody material is not combusted, it is gasified - which is like baking it with a precise, small amount of oxygen.

The South Tahoe Refuse (STR) proposal is for a 125-kW system, which is estimated to offset over a 100% of the annual grid electricity used at their site, and over 90% of their natural gas usage.

There are many examples of the type of technology being proposed in the West, and slide 20 lists some examples:

- District energy plant at Northstar Community Services District in Placer County California
- District heating for Mount Bachelor Ski Resort in Deschutes County Oregon
- 2 MW power plant in North Fork California
- 125 kW CHP system supporting a wood yard in Tuolumne County California

Ms. Hartman said there are many more examples elsewhere in the world, especially in other mountainous communities.

Regarding fuel demand, Ms. Hartman said that STR currently receive, process and transport about 10,000 tons of woody material per year. That material is coming from defensible space and fire mitigation activities in the region, green yard debris, clean construction, and demolition material. The volume of material received is increasing due to the fires in the area, and encouragement to do more defensible space thinning around the community.

Ms. Hartman said the proposed system would only use about a 1,000 tons per year, that's about 10% of what STR currently handles. Because the project has such a small demand, it is not expected to incentivize new fuel reduction treatments to mitigate fire risk in the surrounding area, however they do think it would contribute to community discussion about the value of this type 'right sized' wood energy systems, and how that plays into broader goals.

In terms of traffic, STR currently transports all woody material to the Carson Valley, about 50 miles round trip. The table on slide 23 shows current impacts of those trips vs what that would look like with the proposed gasifier. It is a small system that will not use all the materials by any means, but it will reduce the impacts of that truck traffic by and estimated 72 trucks per year, reduce miles driven by 3,600 miles per year, and reduce associated emissions, noise, and safety concerns.

Results from preliminary emissions modeling are shown on slide 24. Ms. Hartman said they estimate that the system would have very low emission rates with a potential offset needed for NOx. The estimated emissions show that the plant is far below all of the thresholds, with the exception of NOx, which is fairly typical for generators. Ms. Hartman added that there would no visible smoke from this system during normal operations.

Looking at site suitability and the footprint of the system, Ms. Hartman referred to a conceptual design on slide 25. The STR site zoning is commercial mixed use, and the primary use is miscellaneous improved industrial. The gasifier footprint is within STR's current impervious coverage limits, and no trees would need to be removed. Wisewood Energy would work with STR on more detailed design and engineering process should the project move forward.

Regarding noise levels. The noise level for STR's current operations is about 63 decibels, and the average ambient daytime noise levels around the site is around 59 decibels. The three components of system that would be most impactful in terms of noise and are the CHP Engine, the CHP Engine Exhaust, and the Air Compressors. The table on slide 26 shows the results of the noise modelling which shows that the highest noise of 60 decibels is below STR's current noise level. They

do not expect the gasifier to contribute to any increase in noise.

Finally, in terms of safety, Ms. Hartman reiterated that the proposed technology has been installed throughout the world in both urban and semi-urban environments. Operations typically involve a daily visual check of sensors and flow of material. Regular preventative maintenance includes filter changes and annual cleaning - typical for any generator. There is no high-pressure equipment, no hazardous materials or high-risk equipment, so they do not expect to generate any unusual safety or operational requirements.

Ms. Hartman summarized that the proposed system will be a distributed small scale, renewable energy system that will offset on site energy usage, not sell power to the grid, and it will be an opportunity to pilot this type of small-scale system that they think could help meet local goals for a 100% 24/7 renewable energy.

Speaking to next steps, Dr. McIntyre said that TRPA staff feel the information provided by Wisewood Energy and South Tahoe Refuse is sufficient to allow the TRPA to accept an application for review. A submitted application would come to TRPA's full Governing Board for final review in 2023. Dr. McIntyre said this project also offers an opportunity for staff to partner with the California Tahoe Conservancy (CTC) to look more regionally at biomass utilization within the Tahoe basin.

Committee Comments & Questions

Mr. Hicks thanked the presenters and asked what type of system had been proposed back in 2010 on the North Shore project. Ms. Hartman replied that it was a gasifier.

Mr. Friedrich thanked the presenters and said he was impressed by assessment contained in the staff report which provided good historical context, state of technology, and stated the purpose and need. He added that Fire Chief Jim Drennan has submitted a letter of support and that the City of South Lake Tahoe were moving forward with their plan for more defensible space crews to get more fuels reduction work done. So, the volume of wood chips is going to continue to grow, and only one tenth of the current supply is needed for this project.

Mr. Friedrich added that the City of South Lake Tahoe are strongly moving toward achieving their 100% renewable 24/7 goal, and he does not think that can be done without a base load source like biomass. He said this is a win-win-win-win-win solution, and is very strongly supported.

Mr. Friedrich asked what is the most streamlined version of an application review and approval that can be envisioned, because to him it is strongly supported and appears to be ready to go.

Dr. McIntyre said that this project will likely require a CEQA analysis which will dictate the process and timeline.

Mr. Marshall advised that the question before the Committee right now is whether TRPA can even accept the application. This study was used to get over that first hurdle, and then they would have to generate an application. That will take a little time, but the agency is committed to processing the project application similarly to an EIP project because of its potential for reduction in truck trips, and potential for increase in air quality emissions.

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Mr. Friedrich asked STR and Wisewood Energy what they would see as the timeline for permitting and construction. Wisewood Energy replied that construction of the unit would take about 12 months.

Ms. Conrad-Saydah said that she was part of creating the Bioenergy Action Plan for California in 2012, and said it was great to see this effort coming forward. In response to Mr. Marshall's earlier comment about whether TRPA could accept the application, Ms. Conrad-Saydah said she thought it would be great to think about the broader environmental benefits in terms of a reduction in ladder fuels, an increase in healthier forests, and on producing more localized energy (reducing reliance on the wires that often spark these fires). Additionally thinking about localized jobs and reducing transit for people leaving the basin for jobs. If there are jobs for construction and for operations in the long term, that could also be reduce VMT and inspire more economic development in the basin.

Ms. Conrad-Saydah encouraged the applicant to reach out to Elliot Vander Kolk at the Sierra Nevada Conservancy, who may have support and insight to add to the process.

Ms. Williamson asked what is currently happening with waste woody materials. Mr. Tillman said they currently use two different compost facilities in the Carson Valley, but they are concerned that one of these facilities may be closing and are looking for alternatives. He added that some of the material can be used for alternative daily cover at the landfill, but that is not the best use.

Ms. Williamson asked why the comparison was being made to diesel. Ms. Hartman responded that diesel generators are the conventional option for a backup energy generation when trying to mitigate grid outages. So while it's not a business-as-usual comparison for STR, the intent was to show the comparison of emissions to something that that people might be more familiar with.

Ms. Williamson said it might also be helpful as well to see the comparison to business as usual. Ms. Hartman agreed and said that is something that would be included in the next level of analysis.

Ms. Williamson said it would also be helpful to include information on the NOx technology to offset emissions. Mr. Andrew Haden said there are different levels of technology to remove NOx, and if/as they move forward in the permitting process they would outline the options and explain the operational aspects and costs benefits for each.

Mr. Hicks said that as a former member of the Bi State Fire Commission, following the Angora fire, this was one of the topics they discussed. Mr. Hicks recalls that a recommendation was made to TRPA and the two states to look into biomass in the future. At the time, there was a question of the available technology, and a sensitivity about the public response to this type of facility. Based on his experience with the Fire Commission he is 100% support, and believes the time has come. He added that they are not making any final decisions today. Mr. Marshall confirmed that there is no action for the committee today. The next step will be for the Executive Director to accept the application based on reports heard today, which will start the process and analysis of the proposed project.

Mr. Hicks thanked presenters and TRPA staff for bringing this item. He also thanked John Friedrich, who brought this to everyone's attention last year, and got the proposal moving

Public Comment

Mr. Steve Teshara, on behalf of Sustainable Community Advocates, said he appreciates the leadership of all people who were involved in bringing this item forward to the committee today. As the chairman noted, we have newer technology, and we have different needs than what was on the table a couple years ago in Kings Beach. It is time to move away from the absolute prohibition of these types of facilities in the Tahoe region. There are just too many other environmental benefits that we can't accomplish. Mr. Teshara encouraged the committee to support the next steps, and to keep track of this as it goes forward in the planning and environmental review process. Mr. Teshara said he also wanted to thank the family and team at South Tahoe Refuse for bringing this forward, and to thank the experts who talked about how this all works.

Ms. Norma Santiago, representing the South Fork American River Collaborative as a member of their biomass working group. She said that they are very much in support of this project, and that they are working with Wisewood Energy on a very similar project with the Black Oak Mine Unified School District, which is essentially utilizing net metering for the same kind of energy offsets, as well as a workforce development component.

Ms. Santiago said that hopefully, with the success of the pilot project, and the amount of material, they can see more of these smaller units being used in places like Tahoe Community College, thus further minimizing truck trips to the Carson Valley.

In regard to the code language, Ms. Santiago asked Mr. Marshall if he foresees an exemption to the language in order for the permitting to proceed, or would there have to be a language change to the code proposed by staff. Mr. Marshall responded that they are pursuing this on two tracks. One is essentially lifting the moratorium for one particular application as a pilot project, and at the same time, doing a more in-depth analysis that will look at changing the language to the code. So that would be when we would see a general lifting of the moratorium, either by modification or removal of that language.

Ms. Santiago asked how long it might take for a change to the code language and a general lifting of the moratorium. Dr. McIntyre replied that there is an opportunity to work with the California Tahoe Conservancy (CTC) who would be able to fund a grant for TRPA to fly an RFP to do a more regional look at this type of technology and feasibility in the basin. She said they could expect to see a stakeholder engagement process, a communications plan, sideboards on what type of technology they're looking at in the basin, in terms of size, scale, location. She would expect the whole process to take around one year.

Ms. Sarah Letton, Sustainability Coordinator with the City of South Lake Tahoe, said the City Manager has submitted a letter in support of this application, and she wanted to add a few words of support for the project. This project will help the City achieve a number of goals articulated in their Climate Action Plan. They have some very ambitious, renewable energy goals that makes this project very interesting, and they also have an organics procurement mandate, for which it's only possible to look at biomass energy projects to help them achieve the mandate. They are very curious and interested in seeing this project go through, and in seeing if this might be a viable, clean, scalable technology that can help the City achieve some clean, firm, renewable energy in the basin.

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Mr. Hicks noted that South Lake Tahoe Fire Rescue Chief, Jim Drennan, provided a letter of recommendation which really spoke to the issues that were raised following the Angora fire.

Ms. Shelly Aldean said that she was trying to visualize the timeline, and asked if they would need an amendment to the Code, exempting this project as a pilot project from the current moratorium. Mr. Marshall responded no – given the information presented today, for that particular project. The next step would be for the Governing Board to amend that provision.

Ms. Aldean said that as a pilot program, they would presumably wait for the facility to be constructed and operating to evaluate its real-life impacts. She added that she is in favor of this proposal but want to make sure that the intent is not misrepresented to members of the public who were so adamantly opposed to the facility proposed for King's Beach.

Ms. Aldean said that presumably you have pilot programs to demonstrate the efficacy of the process, but it sounds like they are not going to wait for the facility to be constructed and operating to evaluate its real-life impacts. Mr. Marshall replied that they are not intending to delay the examination of the overall policy for several years until the STR project is operational. He agreed that they should clear about that intent.

Mr. Marshall added that they are using the term pilot project in relation to lifting the moratorium for one particular project, and establishing the fact that there is new information relevant to that particular project to allow the Executive Director to lift the moratorium.

Mr. Tillman thanked TRPA staff, and the other agencies and members that have got involved with them over the last year. There has been huge community support for this particular project, and he really appreciates the involvement.

This item was for information only.

IV. Public Interest Comments

None.

V. ADJOURNMENT

Ms. Williamson made a motion to adjourn.

Chair Mr. Hicks adjourned the meeting at 12:15 p.m.

Respectfully Submitted,



Tracy Campbell
EIP Executive Assistant

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The above meeting was recorded in its entirety. Anyone wishing to listen to the recording of the above mentioned meeting may find it at <https://www.trpa.gov/meeting-materials/>. In addition, written documents submitted at the meeting are available for review. If you require assistance locating this information, please contact the TRPA at (775) 588-4547 or virtualmeetinghelp@trpa.gov.