



August 12, 2010

Placer County Community Development Resource Agency
Attn: Maywan Krach
3091 County Center Drive, Suite 190
Auburn, CA 95603

Tahoe Regional Planning Agency
Attn: Jerry Wells
P.O. Box 5310
Stateline, NV 89449

RE: Notice of preparation of a Draft Environmental Impact Statement/Environmental Impact Report for the Lake Tahoe Basin Biomass Energy Facility (Placer County, CA)

Dear Ms. Krach and Mr. Wells:

The League to Save Lake Tahoe (League) and Tahoe Area Sierra Club (TASC) appreciate the opportunity to provide comments on the Notice of Preparation of a DEIS/EIR for the Placer County biomass facility. The League and TASC are concerned with threshold impacts that the plant may create, especially regarding air pollution that may exacerbate the TRPA and State of California ozone standards which are both currently out of attainment, as well as air and water quality impacts associated with the increased vehicle trips.

Air Quality Impacts

The DEIS/EIR must evaluate air quality impacts for each individual air basin. For example, existing pile burning emissions within the Lake Tahoe Air Basin must be quantified separately from pile burning emissions outside of the Lake Tahoe Air Basin. More detailed comments and questions are below.

Environmental Threshold Carrying Capacities

Ozone levels in the Lake Tahoe Air Basin are currently out of compliance with not only TRPA's threshold standard, but also California's 8-hour standard, which are both based on protecting human health. Ozone and its precursors emitted from the facility must be fully analyzed in the DEIS/EIR. The official California designation for the Lake Tahoe Air Basin is now non-attainment for ozone. The state of California has determined that ozone standards for the California side of the Lake Tahoe Air Basin are in violation after this project was first envisioned. Can this facility still be operated in an air basin that is non-attainment for ozone? If so, what additional controls will be installed and what will be the emissions of NOx and HCs – the precursors to ozone formation? The Lake Tahoe Basin is also out of attainment for its air quality threshold standards for CO and particulate matter (PM). The proposed biomass plant will likely emit these constituents into the Lake Tahoe Air Basin. Additionally, pollution associated with Vehicle Miles Traveled (VMT)s is closely tied to lake clarity, which is out of attainment. What contributions will emissions from the facility make to atmospheric deposition to the lake?

The EIS must fully analyze all impacts, including atmospheric dynamics associated with air quality. Why is the air quality analysis limited to receptors within 0.5 miles of the site (NOP, 13)? Is this an appropriate distance given Tahoe's topography, climate, etc.? For example, the Basin experiences frequent inversions, trapping emissions at the surface. Do emissions within the air basin move beyond 0.5 miles laterally?

As discussed in previous TRPA air quality documents, air masses move into the Lake Tahoe Air Basin, to some extent, from corridors such as the Highway 89 corridor between Tahoe City and Truckee, bringing associated pollution with them in the Basin. The potential import of emissions associated with each alternative that occur adjacent to the Lake Tahoe Air Basin (that could move into the Lake Tahoe Basin Airshed) must be evaluated (i.e. trucks traveling to and from the Cabin Creek facility).

Further, while we support practices which reduce overall/net GHG emissions, we remind TRPA that the Lake Tahoe Air Basin is a distinct air basin, and even if practices result in an overall reduction in GHG emissions, this does not negate the impacts of a project to TRPA's very specific air quality thresholds established for the Lake Tahoe Air Basin.

Diesel Emissions

Existing conditions include the emergency backup diesel generator in Kings Beach. As noted previously, what are the baseline emissions and their characteristics (e.g. timing, frequency, exposure level of downwind receptors [e.g. human populations], etc.) from this generator?

For the Kings Beach location, would the biomass facility fully replace the use of this backup generator? If not, then the emissions from the generator must be added to those from the biomass facility, as well as the estimated impacts to downwind receptors. What is the expected timeline of the existing diesel generator and when will it be required to be removed or replaced with cleaner technology by the California Air Resources Board?

For the Tahoe City location, it appears there are no such baseline emissions (per the NOP's project description). If emissions from the diesel generator in Kings Beach do not affect local populations in Tahoe City, we note the EIS/EIR can not include the generator's emissions in the baseline for the Tahoe City alternative.

Emissions associated with existing conditions in each project location must be compared to diesel (and other air pollutant emissions) from:

- The estimated 4 round trips from "large" trucks of incoming material (or 8 total trips) [p. 10], specifically considering VMT *within the Lake Tahoe Air Basin*.
- And/or a larger number of trips if smaller trucks are used (per the footnote in this section).
- The emissions from these trucks at the facility location, including any idling time.
- Emissions from the "diesel-fueled wheeled loader" (bottom of p. 10) for activities described on this page.
- The emissions from the trucks needed to haul the ash out of the facility (p. 11), estimated to be about 1-2 trips per week (2-4 round trips).

This comparison must also take into account not only the total emissions per day, but the location, timing, frequency, and exposure of receptors (people) for all emissions. Additionally, how will TRPA and Placer County ensure that the number, frequency and time of day of truck trips analyzed in the EIS/EIR will never change? Will this be a permit condition?

Bringing Pollution into the Basin

The NOP describes the fuel for the plant as originating "from within and around the Lake Tahoe Basin, generally within a 30 mile radius from the project site and up to a one hour drive" (page 10). Bringing fuel into the Basin means importing the resulting pollution and burning into the Lake Tahoe Air Basin. Since one of the motivations behind the plant is to avoid emissions associated with pile burning in the Tahoe Basin by turning biomass into energy, the EIS/EIR must clearly compare the air quality benefits from reducing emissions from pile burning within the Lake Tahoe Air Basin to the total air quality impacts the facility would emit in the Air Basin (by burning biomass from both within and *outside* of the Lake Tahoe Air Basin, as proposed).

The NOP also mentions the potential to bring in materials from even farther away: "Costs associated with transport of woody biomass limits the market area for fuel acquisition. However, fuel sources could come from

longer distances if economics allow” (page 10). What maximum distance will the EIS/EIR analyze in terms of trucking materials into the Basin? The EIS/EIR must clearly analyze all potential impacts of bringing material into the Basin, including potential future emissions associated with hauling in more biomass (as from a larger area).

The DEIS/EIR must analyze the impacts of each alternative to all federal, state, and local (e.g. TRPA) air quality standards and regulations. Further, as the facility proposes to haul biomass in from outside of the Basin (as well as burn “clean urban wood” and “green waste,” both sources that are not being diverted from pile burning), the facility *can not* qualify for the exceptions provided by TRPA’s Chapter 91 for biofuel facilities, and thus the stationary source emissions requirements in that chapter must be met.

The type of materials and resulting pollutants must be comprehensively analyzed in the environmental document. What, exactly, is “clean urban wood” (p. 9)? Are there other uses for this wood? What are the emissions from this type of wood compared to forest biomass? What is considered “green waste” and how is this different from forest biomass? What would otherwise happen to both the “clean urban wood” and the “green waste” since clearly these would not otherwise be pile burned? Are there any ‘emissions savings’ from using these sources in the biomass facility versus the other options of disposal (within the Lake Tahoe Air Basin)?

How toxic are the materials that will be stored on the site? (For example, what are the chemical characteristics and risks associated with the urea used for NO_x emissions control [p. 11]?)

Comparing Impacts

The NOP states that the DEIS/EIR, “will compare emissions from uncontrolled open burning of biomass” with emissions from the facility” (p. 13). This is only one comparison. Using uncontrolled open pile burning to reduce fire fuels in the Lake Tahoe Basin is just one option available for disposing of biomass. Emissions from the plant must be compared to emissions that would result from other methods that *could* be utilized. For example, air curtain burners are a viable alternative to pile burning in certain locations, and burn very clean.

The NOP states that the plant would run 24 hours a day. During inversions, localized air quality impacts from the facility may be magnified. Currently, pile burning must be executed during more favorable conditions per CARB requirements. The impacts of the biomass facility being run continuously, even on “bad” air days, must be fully evaluated in the DEIS/EIR.

The Forest Service is not listed as a partner in the project even though the Forest Service manages about 75 percent of the Lake Tahoe Basin. Will materials from Forest Service lands in the Basin be taken to the facility? If open pile burning still occurs on Forest Service lands in the Basin, then how will the biomass facility be an improvement from current practices?

The NOP (and other previous documents, for example the draft March 2010 Air/Water Emissions and Carbon Credits/Emissions offsets) implies this facility would increase the extent of thinning performed in the Lake Tahoe Basin, as well as reduce the occurrence of catastrophic wildfire. Would this facility really have any effect on the number of projects that are done in the Lake Tahoe Basin, the timing of those projects, acreage thinned, etc.? How? In addition, operating the facility during the summer, and to some extent during the shoulder season, may exacerbate harmful ozone conditions endangering human, wildlife, and vegetation health as well as worsening conditions in an air basin already listed as being in violation of CARB standards.

Impacts from the proposed facility must be compared to the in-Basin environmental impacts of trucking material out of the Basin to the biomass facilities already in operation. On page 5 of the NOP, it states “...biomass material is already being processed and transported to two biomass power plants (Loyalton and Carson City) and chipped and used for ski slope stabilization.” What is the capacity of these two other plants? What is the current status and capacity of other biomass facilities within the northern CA and northern NV areas that material could be hauled to? (e.g. in addition to Loyalton and Carson City – Quincy, CA, Rocklin, CA, Honey Lake, CA?) Are they 1) still operating and if so, 2) operating at full capacity? Do they (or will they) need more biomass to sustain their

operations? What is the distance travelled (as VMT) within the Lake Tahoe Basin for biomass that is hauled to these locations? We assume that it is generally one round trip (the empty truck coming into the Basin, then the loaded truck leaving the Basin). Alternatives must include a situation where, as more forest thinning is performed in the Basin, the increased biomass supply is hauled outside of the Basin to the Loyalton, Carson City and/or other facilities.

If there is existing power 'replaced' on the grid, where is this existing power being generated? Is the existing power generation creating air emissions within the Lake Tahoe Air Basin? Or, would the proposed alternatives be "replacing" emissions in other air basins with added emissions in the Lake Tahoe Air Basin?

We also note that the proposed project claims to reduce "regional emissions" from pile burning, although the pile burning emissions would occur in at least two separate air basins.

- Given this fact, shouldn't the analysis also evaluate conditions for the air basins affected by the Loyalton and Carson City biomass facilities? Other nearby air basins?
- If Placer County and the TRPA want to look at emissions regionally (although we note that TRPA must consider specific impacts to the Lake Tahoe Air Basin *only*), then the comparisons and tradeoffs should also analyze the same for air basins affected by *all* alternatives (which are, as stated in the NOP, already noted as part of the existing conditions).

Why is there a need for a pilot project in the Basin (p. 5)? Haven't these facilities already been installed and tested throughout the country? Throughout Sierra Nevada communities? What other facilities have been studied, how have they worked, etc.? What differences would necessitate another "demonstration" project, let alone one within the Lake Tahoe Air Basin? Objectives also include "demonstrate the use of waste heat from electricity production to heat on-site buildings and melt snow and ice on sidewalks, parking lots and roadways..." Haven't other biomass facilities already been installed and demonstrated for these uses elsewhere? What other methods are available to generate the same amount of power within the Lake Tahoe Basin, and what are the associated air quality impacts within the Lake Tahoe Air Basin? Is this energy needed in the Basin? What other alternative locations were considered outside of the Lake Tahoe Air Basin? Why were they not included? It is important to compare alternative locations to Kings Beach and Tahoe City in terms of total VMT in the Lake Tahoe Air Basin.

Impacts to the Tahoe Basin must be clearly evaluated in the DEIR/EIS. The second bullet on page 5 states the objectives include "improve regional air quality..." What do Placer County and TRPA consider "regional?" This facility was originally proposed to process only biomass removed from within the Lake Tahoe Air Basin. However, the NOP states a 30 mile radius will be drawn around the facility's location and thus biomass will be imported. How was the 30 mile radius selected? What is the industry standard? The Loyalton facility has imported wood from Sacramento, a source that is over 150 miles from the facility. Potential distances from the plant that material could be collected from and the associated impacts must be clearly stated in the DEIS/EIR. The NOP must discuss 1) air emissions associated with pile burning that would be conducted within the Lake Tahoe Air Basin (Basin) only, 2) air emissions associated with pile burning that would be conducted outside of the Lake Tahoe Air Basin (and within the 30 mile radius) and 3) air emissions associated with the proposed facility for each alternative.

Emissions for the proposed facility must be compared separately to the pile burning emissions within the Tahoe Basin and those within the affected air basin(s) outside of the Tahoe Basin. The EIS/EIR **can not** compare the total emissions from pile burning of materials both within and outside of the Lake Tahoe Air Basin to the emissions produced by a facility within the Lake Tahoe Air Basin as "emissions saved" because the pile burning emissions would occur in distinctly separate air basins.

This same requirement applies to the comparison to particulate deposition to Lake Tahoe – only emissions "saved" within the Lake Tahoe Air Basin can be counted. However, because it is not yet well understood what proportion of particulates emitted into the air (and specifically from pile burning, which is done on certain days to reduce air quality impacts) will deposit into Lake Tahoe, how will the analysis estimate the deposition of particles from each alternative (the 3rd objective [p. 5] states the project will "[reduce] deposition of particulate matter associated with open burning of biomass waste")?

Also, while the proposed Kings Beach site “existing conditions” will include the emissions from this emergency diesel generator, the Tahoe City site is a completely different location with different meteorology, receptors, etc., so the Tahoe City alternative *cannot* consider the existing diesel generator in its ‘existing conditions.’

VMTs

VMT increases associated with the proposed biomass plant pose a significant concern. The NOP describes trucks first taking material to the Cabin Creek Processing Facility outside of the Basin and then trucking materials back into the Basin. The VMTs from trucking material daily out of and into the Basin must be carefully analyzed in the EIS. The proposed project’s location would require that trucks travel on already congested roadways, including SR 267 and SR 89. The EIS should evaluate the additional air quality impacts of these trucks sitting in congested peak traffic times. VMTs should also be compared to VMTs that would occur if the materials were trucked to the existing Loyalton biomass facility or an alternate facility outside of the Basin.

An objective of the project is to reduce the trucking costs and air pollution from hauling materials out of the Lake Tahoe Basin.

- However, the facility will require multiple trips for biomass materials: first, the materials are hauled out to the Cabin Creek Facility, then hauled back into the Lake Tahoe Air Basin to the facility site. This could essentially double the VMT within the Lake Tahoe Air Basin for each load being hauled.
- Further, add in the VMT from ash removal, new employee trips, etc., and this project could create substantial VMT, and thus air pollutant emissions, within the Basin. (See detailed comments regarding diesel emissions).

The EIS/EIR/EA must analyze ALL of the emissions that will occur with each alternative specifically within the Lake Tahoe Air Basin.

The transportation analysis noted on page 15 must include factors previously referenced in this letter. Additionally, the information must be compared to the existing conditions and alternatives where materials are hauled outside of the Basin (to Loyalton, for example), including the increased hauling of materials associated with increased thinning in the Basin. Analysis must be performed for impacts to each distinct air basin where travel will occur.

Green House Gasses (GHGs)

Controversy has arisen in recent years whether biomass energy production is efficient and whether the green house gas emissions from the plants actually lead to a reduction in green house gasses, when compared to other means of energy productionⁱ. Recent studies have found that assessing biomass facility green house gas emissions is much more complex than previously thoughtⁱⁱ. The EIS must contain a robust and thorough analysis to determine if the proposed biomass plant would actually lead to a reduction in green house gasses.

The analysis of the “net gain or net loss” of GHG emissions from each alternative must not be biased or conducted with preconceived assumptions (on page 14, the document states the document will also “address the avoidance of GHG emissions from alternative fates” – thereby presuming GHG emissions will be avoided through the proposed project). It has long been assumed that biomass facilities create a net loss in GHG emissions, however, as mentioned above, more recent science, including information based on already installed and operational facilities, has suggested this may not be the case.

What is the most current state of science regarding forest management and GHG emissions? For example, since CA adopted AB 32 and subsequent legislation, there has been much debate regarding which forest practices affect GHG emissions and in what ways. How is CA currently looking at forest management and GHG emissions?

Human Health Impacts

The NOP states that air quality impacts will be compared with “uncontrolled open burning.” The EIS must compare the cumulative human health impacts of the transport of the material, along with the 24 hour per day, 330 day per year operation of the plant in close proximity to schools, child centers, neighborhoods and tourist areas. Biomass facility air impacts to these populated areas must be compared to at least three scenarios: 1) current air quality, 2) air quality impacts from potential open burning 3) air quality impacts from increased hauling of biomass to other locations, and 4) air quality resulting from employing best management practices including curtain burners.

- We expect the Health Risk Assessment will assess the impacts of the facility’s emissions on the nearby populations, including the schools, day cares and other more sensitive receptors associated with the Kings Beach and Tahoe City alternatives (as listed on page 6)The analysis must also evaluate the local meteorological conditions in each area. For example, what are the current emissions from the emergency backup diesel generator in Kings Beach? How often do they occur, and where do they end up via air mass movements and other factors? The same questions apply to the proposed alternatives – for example, what are the emissions from the proposed sites, where are the emissions likely to ‘migrate’ to and at what exposure level? What level of dilution can be expected? How does the topography of each location impact the movement of air masses?
- How do these emissions, their concentrations, timing, frequency, etc., compare to the emissions from pile burning within the Lake Tahoe Air Basin (including only those pile burning emissions which affect the same receptors as the proposed facility would)? In other words, what are the air quality impacts on the receptors (e.g. residences, schools, etc.) that will be affected by the proposed facility versus the impacts of the emissions from pile burning which affect those same receptors (on a peak hour, per day, 24-hour average and annual average [to correlate to air quality standards for pollutants such as ozone and PM])? Please note that these are total concentrations at the receptor locations (what concentrations people are exposed to downwind), as opposed to simply looking at total emissions per air basin.
- What are the air quality impacts of a direct combustion versus a gasification system, in total plus per the questions asked above (e.g. location, timing, etc.)?
- The analysis must analyze PM₁₀ and PM_{2.5} separately. Air quality standards are based on both size classes, and we know PM_{2.5} has a greater impact on human health.

In the Cumulative Impacts and Indirect Effects section, the analysis must also consider the cumulative impacts of projects in the proposed TRPA Regional Plan Update alternatives, which will overlay the community plans (and require they be updated), rather than just the potential growth based on existing Community Plans, as suggested in the NOP.

Long Term Sustainability

The League and TASC seek information on how long the proposed plant is intended to operate, the amount of fuel needed in the long-term and what will happen to the plant if it is shut down. Although forest fire fuels are constantly renewing, the EIS must evaluate the speed these fuels become available compared with how quickly the operations would process the fuels. The EIS must also analyze the potential impacts to forests in the Basin from over-harvesting. There exists a danger that the need for energy and energy profits from the plant will create a motivation for over-harvesting of forests.

The objectives also include: “Create the potential for future export of waste heat energy to proposed projects and for community benefit to the North Lake Tahoe Area.” The environmental analysis must therefore evaluate the potential for this facility to increase the number and types of other such facilities within the Basin, and North Lake Tahoe area. Further, this must be compared to the supply of biomass materials planned for pile burning within the Lake Tahoe Basin only. Also, what are the air quality implications of such an outcome - both local and cumulative?

Operating Costs

While the economics of building a plant for use by a private energy provider have not been completely described, nor the form such an arrangement would take, it is important for the EIR/EIS/EA to provide a complete analysis and evaluation of present energy costs, predicted future energy costs, and descriptions of contract language that will limit the private company from imposing additional costs on local residents as a result of unforeseen expenses related to management and operation of the biomass facility. These calculations and documentation must be thoroughly sourced in the documents.

The League and TASC appreciate the opportunity to provide comments during this process. If you have any questions, please feel free to contact us.

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ⁱ Searchinger, Timothy D. et. al. "Fixing a Critical Climate Accounting Error: Rules for applying the Kyoto Protocol and national cap-and-trade laws contain a major, but fixable, carbon accounting flaw in assessing bioenergy". Science. Vol. 326, October 23, 2009.

ⁱⁱ Walker, Thomas, et. al. "Biomass Sustainability and Carbon Policy Study". Manomet Center for Conservation Sciences: June 2010.