

# WILDEPHOR

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July 14, 2021

Jennifer Callaway  
Town of Truckee  
10183 Truckee Airport Road  
Truckee, CA 96161

CC: Kevin Smith (Truckee Tahoe Airport District)  
Bill Seline (Truckee Fire Protection District)

**RE: Bioenergy Project Scoping Study**

Dear Ms. Callaway:

Wildephor Consulting Services, LLC is pleased to provide this proposal for services to the Town of Truckee to complete a scoping study evaluating the potential for using biomass from defensible space and forest fuels management activities to produce heat and/or power for a cluster of facilities near the Truckee Tahoe Airport. The scoping study will include a series of tasks as described below to determine whether such a project warrants a more in-depth feasibility assessment to support future capital investment in a bioenergy facility.

## Scope of Work

1. Define specific problem to be solved
2. Collect and compile relevant data
3. Develop range of candidate solutions
4. Establish appropriate evaluation criteria
5. Evaluate candidate solutions
6. Identify preferred solution(s)

1. Define specific problem to be solved. The Town of Truckee (Town) along with the Truckee Tahoe Airport District (TTAD) and the Truckee Fire Protection District (TFPD), hereinafter referred to as the project partners, have expressed interest in using locally generated biomass to offset fossil fuel consumption while reducing greenhouse gas (GHG) emissions and the risk of catastrophic wildfires. Initial discussions have identified some general challenges and potential solutions; however, in order to fully develop a range of suitable technical solutions and to ensure organizational alignment, it will be necessary to first define

the specific “triple bottom line” economic, environmental, and social objectives of the project partners. This is analogous to a requirements definition task, which helps to avoid scope creep as potential solutions are considered.

2. Collect and compile relevant data. The project partners already have identified potential heating and power loads that could be served by a bioenergy project, as well as several available sources of residual biomass. Existing heating and power loads will be confirmed by compiling utility data for facilities in the proposed cluster, and an assessment will be made of the type and quantity of biomass feedstock that could be reliably sourced within the local Truckee area.

3. Develop range of candidate solutions. Based on findings from other similar efforts in the Tahoe Basin, it is likely that multiple potentially viable technology solutions will be identified by the scoping study. Specific outcomes from implementing various candidate solutions will be described and, to the extent possible, quantified using broad ranges (e.g., operating costs, feedstock volumes, plant footprints). At this stage, solutions will be considered in terms of their orders of magnitude, for example, by comparing costs to the nearest million dollars. More precise estimates of capital and operating costs for a given solution would need to be developed as part of a subsequent feasibility assessment.

4. Establish appropriate evaluation criteria. Candidate solutions will address a triple bottom line of economic, environmental, and social impacts. Evaluation of technical and economic viability will focus primarily on heat and power generation. Previous work by the Placer County Air Pollution Control District and others with respect to air emissions and carbon accounting for bioenergy projects will be used to estimate potential environmental benefits. Other environmental issues such as water use and landscape impacts also will be addressed, as appropriate. Estimates of job creation and/or capacity building in the local forest products industries will be provided to the extent possible based on available data.

5. Evaluate candidate solutions. A “scorecard” summarizing the attributes of each candidate solution will be developed to communicate findings to project stakeholders and to aid in the decision-making process of the project partners. This will include a narrative discussion of trade-offs among the alternatives in terms of their triple bottom line impacts.

6. Identify preferred solution(s). It is anticipated that potentially viable solutions identified by the scoping study will serve as the basis for a more rigorous feasibility assessment and conceptual design development to follow. As such, the results of the proposed study should be considered preliminary and subject to further refinement in consultation with the Town and its project partners.

## **Schedule**

The scoping study could begin on or about August 1, 2021. Based on the activities outlined above and assuming that the required data are readily available, the scoping study could be completed by **November 30, 2021**. The final written deliverable would be a memo to the

project partners along with a presentation of results to the Truckee Town Council, TTAD Board of Directors, and/or TFPD Board of Directors.

**Cost**

The scope of work outlined above is anticipated to require 120 hours of labor at a standard hourly rate of \$160/hour, for a total cost of **\$19,200** offered as a firm fixed price. Travel to the proposed project site would not be required for the initial scoping study.

I appreciate the opportunity to submit this proposal, and I look forward to receiving your response. Please do not hesitate to contact me if you have any questions or would like any additional information.

Kind regards,



W. David Featherman  
Principal