



Placer County's Bio-energy Project: Health Impact & other Excellent Adventures

Presented to:

Climate Action Team Public Health
Workgroup

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Why Did Placer County Embrace Biomass ?

- Placer County Problem: History of increasing forest fires, increasing open burning of piles, increasing air emissions, canceling of fire insurance, respiratory related health issues
- Board Of Supervisors Direction
 - Reduce Catastrophic Fire Conditions
 - Improve Regional Air Quality
 - Provide Long Term Solution for Forest Waste
 - Create Employment Opportunities
- Develop Strategic Plan (*adopted in 2007*)
- Develop Public/Private Biomass Facility





What Has Been Accomplished To Date ?

- ✓ Program Management Accomplishments:
 - Engineering analyses & design gasification heat & power facility
 - Fuel supply contracted: USFS 10 year Stewardship Agreement
 - Permitting and land use conditions: Environmental/Design Approved
 - Economic pro-formas: Undergoing private financing review

- ✓ Key Milestones:
 - Overall project feasibility studies confirmed likely success in 2010
 - Met all technical, economic and environmental standards by 2012
 - Power Purchase Agreement, Private financing and Investment tax credits during 2013
 - Facility built in 2014 ? Operational in 2015 ?



What Does the Facility Look Like?



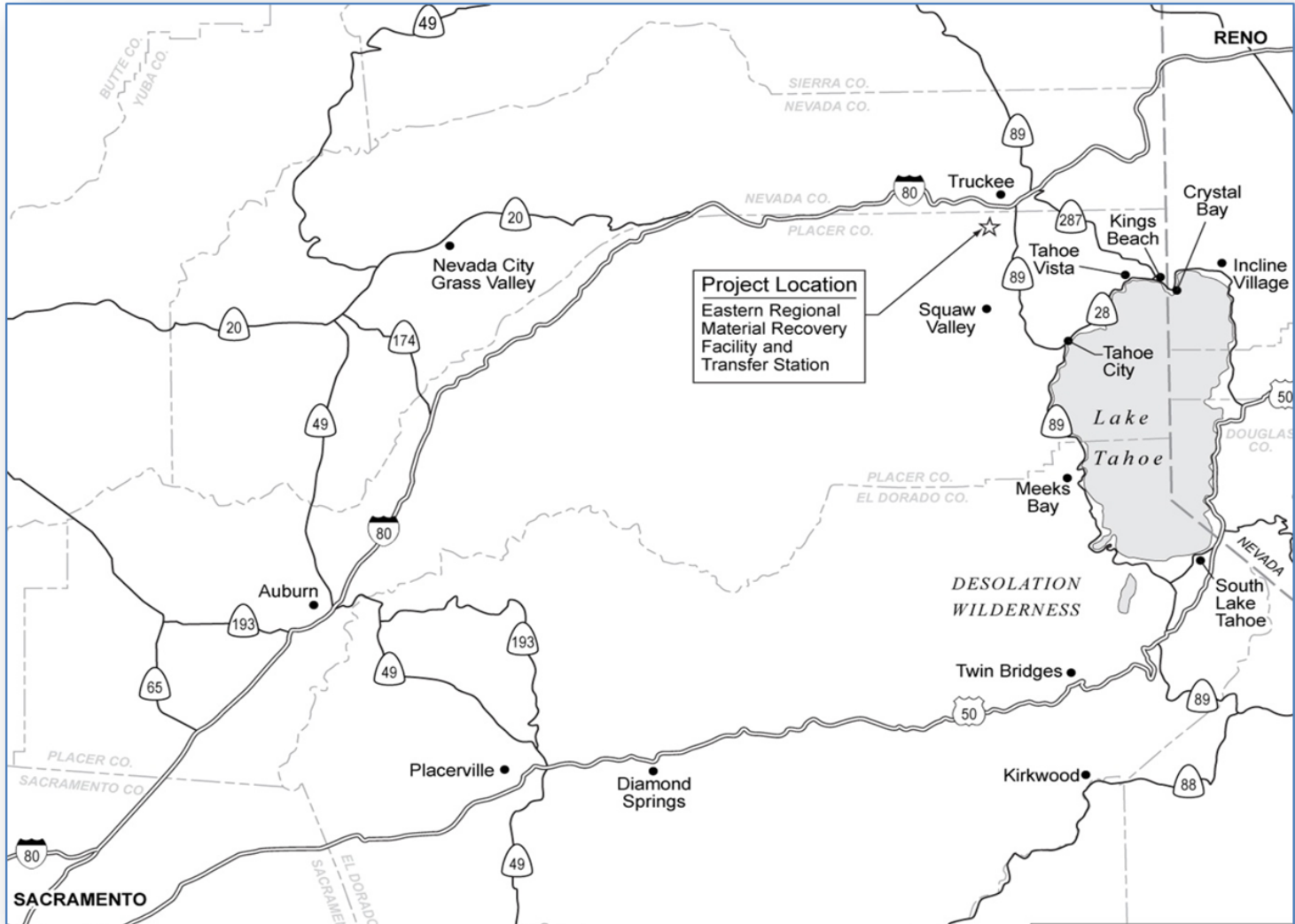
VIEWPOINT 1 VISUAL SIMULATION

CABIN CREEK BIO MASS FACILITY
PLACER COUNTY, CALIFORNIA


WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS
3301 C Street, Bldg. 100-B Tel: 916.341.7760
Sacramento, CA 95816 Fax: 916.341.7767



Where is the Facility Located ?





What Does Technology Look Like ? ***(Gasification Process)***

Creates Solution



Creates Syn Gas



Creates Electricity \$



Creates Bio-char \$



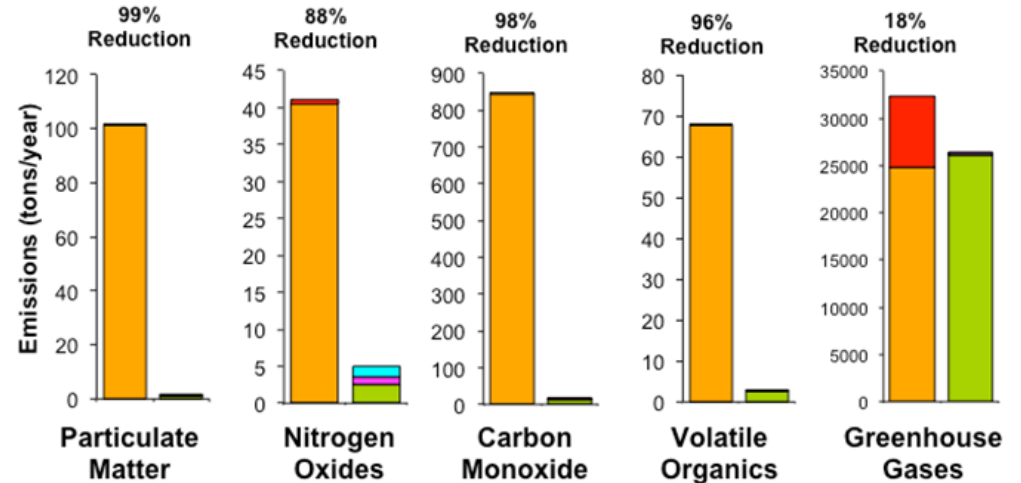


What Do Emissions Look Like ?

Avoid Open Pile Burns



Reduce a Variety of Emissions



Avoided Emissions	NO _x	ROG	PM ₁₀	PM _{2.5}
Open Burning of Forest-Sourced Biomass	78	102	167	142

Notes:
 ROG = reactive organic gases
 NO_x = oxides of nitrogen
 PM₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
 PM_{2.5} = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less
 tons/year = tons per year

Estimated emissions levels assume that 17,000 bone dry tons of forest-sourced biomass would be consumed by the plant. Appendix X for detail on model inputs, assumptions, and project specific modeling parameters.

Source: Modeling Conducted by Ascent Environmental 2012.



How has This Branched Out ?

Placer County has received requests from multiple counties in Ca and other states to develop program

Sierra Nevada Conservancy is now supporting multiple organizations to develop small facilities

Protocols have been developed in support of both avoided burning to energy (adopted by CA Board of Forestry & others) and bio-char (in progress)

Public Utilities Commission has embraced small biomass facility support – AB1122

New markets are opening up – Carbon/CEQA/Bio-char

***Scandinavian countries have been doing this for years
heating whole towns/managing fire danger***



Why Do an Health Impact Assessment ?





What Is The Value Of a Health Impact Assessment ?

- Public allowed to ask “Fantastic” questions
- Outside 3rd Party review of impacts
- Qualitative +Quantitative Information = Greater Acceptance
- ✓ Environmental Impact Report clearly showed :
Less than Significant Impact
- ✓ Health Risk Assessment for cancer showed :
No Significant Health Risk
- ✓ Health Impact Assessment provided health review and statement :
Likely benefit community health in the Lake Tahoe Region



Questions/Comments

<http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/Biomass.aspx>

