

ETAAC: FOREST SECTOR OPTIONS



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PROCESS TO DATE

- **Outreach: First Round meetings**
 - US Forest Service Region 5: Biomass and Climate Group
 - ARB Forest Sector staff; CDF Climate grp.
 - California Forestry Association
 - Schatz Lab: Humboldt State University
 - E-mail contacts: Academic and other researchers
- **July-September: Further meetings planned**
 - Add Environmental and EJ stakeholders
- **Collate information with ETAAC Energy Sector: Renewables sub-group**

FOREST OPPORTUNITIES in a Climate Strategy

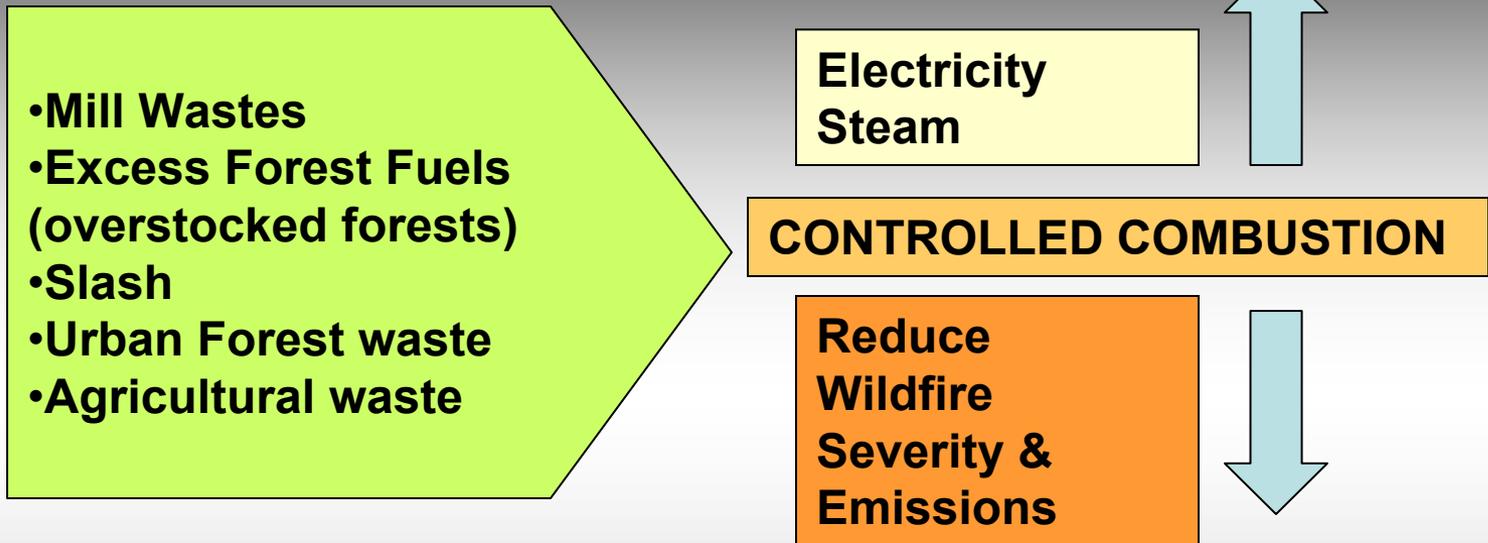
- **Forest Management to Reduce GHGs**
 - C storage in forests and wood products is a Bridging strategy towards a low-C economy
- **Avoid C emissions caused by forestland conversion**
- **Wood Product Opportunities**
- **Biomass Opportunities**
- **Longer Term: Ligno-Cellulosic Biofuels**



BIOMASS OPPORTUNITIES

CLIMATE BENEFITS OF FOREST BIOMASS: TWOFOLD

- Renewable Fuel Source
- Wildfire Avoidance



CONCERNS

- Ensure a Net GHG Benefit (Life Cycle Analysis):
 - esp. Transport of heavy, wet material

- Overdoing it – Ecosystem impacts
- CO-GEN already widely used in mills
- Further incentives to consider

BIGGEST PUBLIC CONCERN & Ultimate Constraint

**Given public sensitivity to forest biomass
ETAAC could consider a Recommendation to ARB:**

Develop Criteria for Evaluating Biomass Opportunities

E.g. A GREEN BIOFUELS INDEX (courtesy Alex Farrell) addressing such options as:

- Allow the Market to reflect efficient labeling and claims
- Develop protocols
- Environmental labeling
- Preference for purchase of green biofuels
- Incentives for environmental performance
- Establish aggregate green biofuels performance standards etc....

Turner B., R. Plevin, M.O'Hare and A. Farrell. 2007 Creating Markets for Green Biofuels: Measuring and improving environmental performance.

Institute of Transportation Studies, UC Berkeley Transportation, Sustainability Research Center. Year 2007 Paper UCB-ITS-TSRC-RR-2007-1

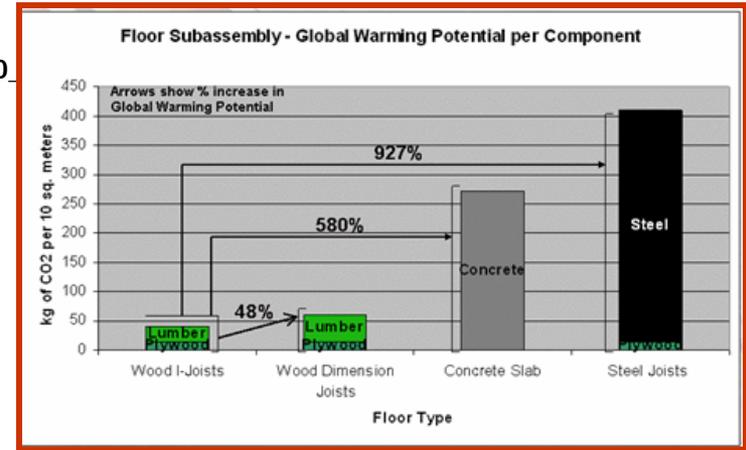
WOOD PRODUCT OPPORTUNITIES

Wood is more climate-friendly than concrete or steel

“..a wood house contains the lowest embodied energy (GHG), followed by concrete and then steel. ..”

<http://www.boralgreen.shares.green.net.au/research3/chap5.htm>

B. Lippke, CORRIM <http://www.corrim.org/ppt/2005/ncasi/pages/Slide60>



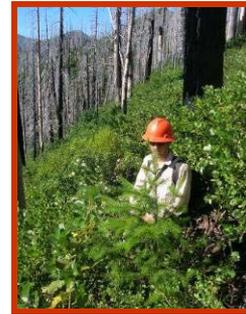
ETAAC: CONSIDER ENDORSING “CA GROWN” labeling



FOREST MANAGEMENT OPPORTUNITIES

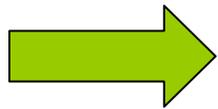
CALIFORNIA FOREST PROTOCOLS NOW IN PLACE:

- Forest Management
- Reforestation
- Avoided Deforestation



Address key elements:

BASELINE, ADDITIONALITY, LEAKAGE and PERMANENCE



PROTOCOL REVIEW IS A SEPARATE ARB PROCESS

RECOMMEND FOR ETAAC:

A) Beyond the scope of ETAAC to make specific recommendations on current Forest Protocols

- Let protocol review occur in the separate ARB forum

B) Within ETAAC Scope: Offer Recommendations regarding

- Biomass and Co-Generation opportunities
- Future ligno-cellulosic biofuel potentials

NEXT STEPS

- **CONTINUE Outreach and Information Collection - 1ST AND 2ND Round by September**
- **GENERATE more specific data on Biomass opportunities (conflicting numbers depending on assumptions)**
- **State agency CAT Team re-doing Forest estimates**
- **COORDINATE data and presentation with ETAAC Energy Sector, Renewables sub-group**
- **OFFER Draft Report outline and Recommendations to full ETAAC at September meeting**

... look at the green!

CALIFORNIA'S AGRICULTURAL AND FOREST OPPORTUNITIES



Forest and Wood Products have an important role in California's Climate Strategy:

- **SINK---** Photosynthesis
- **EMISSION SOURCE ----** When forest land base is converted
- **SOURCE OF RENEWABLE FUELS---** Biomass, LignoCellulosic
- **REDUCE WILDFIRE EMISSIONS**

Many opportunities, but need to address environmental constraints and public concerns for successful implementation



DISCUSSION?

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