



The Need for Fire- Hardened/Resilient Communities AND Landscapes

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Increasing Threat of Mega-Fires and Their Consequences





Climate Change to Bring More and Severe Wildfires to BC: Report

Vancouver Sun, June 8, 2012

- Number of major fires in BC likely to increase by >50% in next 40 years,
- Warmer temperatures,
- Declining and disappearing mountain snowpacks,
- Drier summers,
- More intense rainfall

IBC  BAC | Insurance Bureau of Canada
Bureau d'assurance du Canada

TELLING THE WEATHER STORY

PREPARED BY
THE INSTITUTE FOR CATASTROPHIC LOSS REDUCTION (ICLR)
FOR INSURANCE BUREAU OF CANADA (IBC)

June 2012



Community and Landscape Wildfire Costs

- Insured and uninsured home losses - \$450 million for Waldo Canyon Fire
- Watershed impacts (slope stabilization, secondary water quality treatment) - \$1.8 billion for Rim Fire
- Human health effects (respiratory only) - \$12 million for Chisholm Fire
- Recreation sector impacts (southern Okanagan 2003) - \$80 million for the Okanagan Mountain Park Fire
- Transportation sector impacts - CN Rail - \$1 million/hour (numerous fires)
- Transportation sector impacts - \$45 million/day for I-15 due to 2003 Southern California Fires

Large Area to Treat Means Large Volume of Biomass to Dispose of

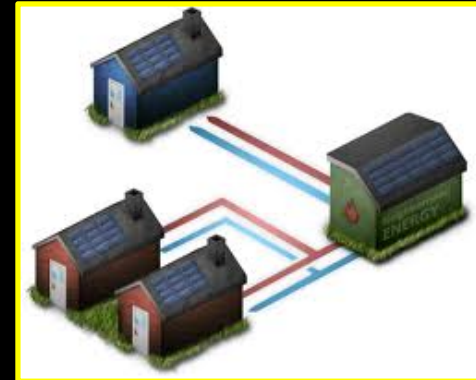


- 10 km radius around Cranbrook and Kimberley encompasses approximately 100,000 ha of hazardous fuels,
- Forests around 2 communities yield approximately 45 Bdt/ha of non-merchantable biomass,
- Total volume to address is 4.5 million Bdt,
- Need to treat it in decades not centuries.

Small-Scale Biomass Utilization

Large interest in realizing energy cost savings at the community level as well as positive side benefit of reducing wildfire threat.

Even at current low natural gas prices biomass heat can provide significant heating savings (less so for electricity).



Example: City of Cranbrook

- Top 10 public energy users (hospital, schools, rec-plex, airport terminal, etc.)
- Annual heating cost using natural gas = \$849,339
- Potential annual cost savings using biomass thermal = \$434,701

DOWN SIDE: only utilizes 2,000 bdt/year (45 ha treated)





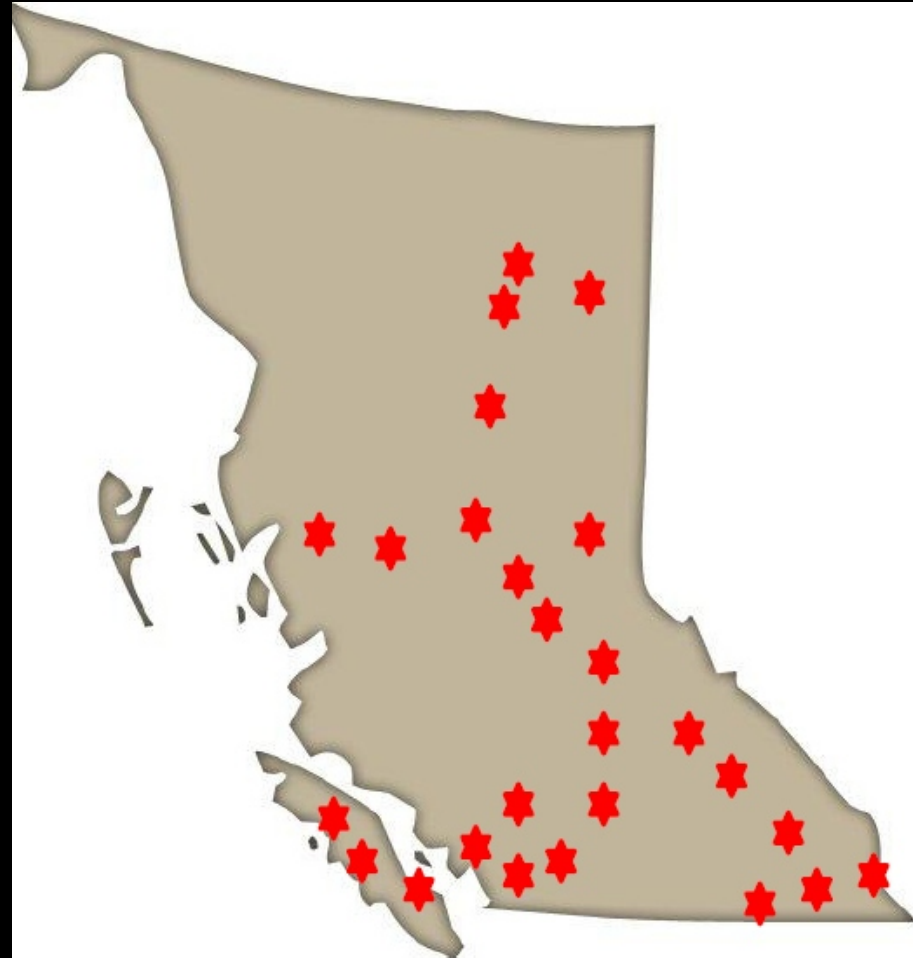
Large-Scale Biomass Utilization

- Scale of solution must be commensurate with the scale of the problem,



- Large global demand for renewable energy including biomass,
- Biomass used to produce energy considered carbon neutral

Holistic Hazard Reduction



Current Initiatives

- Solving the WUI problem and making large quantities of biomass accessible to investors:
 - UBCM resolution – Community Forest Management Zone for Wildfire Hazard Reduction,
 - Supporting policy paper: *Bioenergy as a solution to BC's Wildland-Urban Interface fuels problem: a policy analysis.*





Summary/Conclusions

- Scale of forest health problem, and the volume of biomass that needs to be treated immediately, is daunting,
- Biomass can be either a windfall to the province and its rural communities, or a significant social, environmental and economic cost,
- Rural communities need to benefit financially from the emerging bio-economy - not just multi-national corporations
- **And, we need to act NOW!**

Additional Information

- City of Cranbrook UBCM Resolution
- Gray, R.W. 2014. Bioenergy as a solution to British Columbia's wildland-urban interface fuels problem: a policy analysis. *Journal of Ecosystems and Management* 14(3): 1-8.
- Biomass thermal energy feasibility study for the City of Cranbrook
- Contact me at bobgray@shaw.ca for copies of any of these reports.



Community Forest Management Zone for Wildfire Hazard Reduction

- Allow local and/or First Nations government to manage the WUI zone,
- Allow local government to set the spatial boundaries of the WUI zone,
- Pool all fiber in the WUI zone and stress economic maximization,
- Place all revenues from the sale of WUI zone forest products in a locally administered trust account dedicated to forest fuel reduction and stand maintenance operations,
- Remove all Crown forest stands within the zone from the Timber Harvesting Land Base,
- Make forest stands in the WUI zone eligible for carbon offsets.