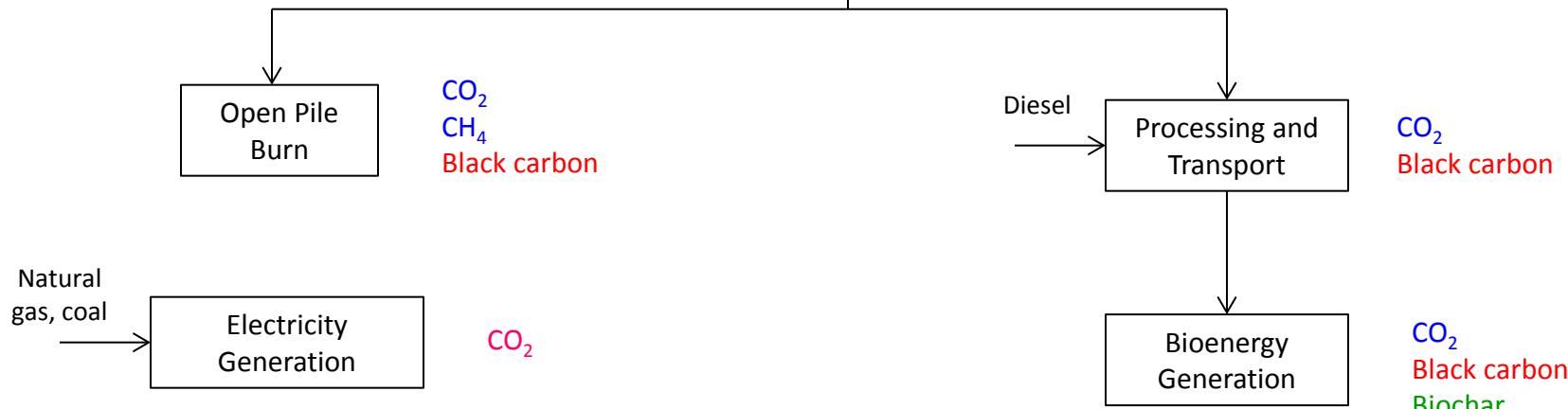


Woody
Biomass
Waste



BLACK CARBON

	total PM (g/kg)	Ref.	BC/PM	BC (g/kg)	Ref.	BC CO2e (MT/BDT)
Pile burn	6.5	1	0.05	0.325	2,3,4,5	
Boiler	0.15	6	0.1	0.015	6	
Chip van	0.0018	1	0.75	0.0014	7	
Grinder	0.0042	1	0.75	0.0031	7	
Benefit				0.31	8	0.275



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2. J. Reid, R. Koppmann, T. Eck, and D. Eleuterio, A review of biomass burning emissions part II: intensive physical properties of biomass burning particles, Atmospheric Chemistry and Physics, Vol. 5, pp. 799-825, 2005.
3. L. Chen, H. Mosmuller, W. Arnott, et al., Emissions from laboratory combustion of wildland fuels: emission factors and source profiles, Environmental Science and Technology, Vol. 41, No. 12, pp. 4317-4325, 2007.
4. G. McMeeking, S. Kreidenweis, S. Baker, et al., Emissions of trace gases and aerosols during the open combustion of biomass in the laboratory, Journal of Geophysical Research, Vol. 114, D19210, 2009.
5. W. Battye and R. Battye, Development of Emissions Inventory Methods for Wildland Fire, U.S. EPA Contract No. 68-D-98-046, February 2002.
6. Source test data for PM from biomass boilers at Rio Bravo Rocklin and Sierra Pacific Industries Lincoln. Discussions with boiler operators.
7. U.S. EPA, Report to Congress on Black Carbon, Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010, EPA-450/R-12-001, March 2012.

BIOCHAR

Biochar production rate

0.10 lb biochar/lb biomass

Carbon content of biochar

0.75 lb C/lb biochar

CO₂ sequestered in biochar

0.28 MT CO₂/BDT biomass