

BIOMASS INCINERATION HAS “UNACCEPTABLE HEALTH RISKS” AND DRIVES UP HEALTH CARE COSTS

I. Leading medical associations and public health advocates oppose biomass incineration and are demanding an end to taxpayer and ratepayer subsidies for these facilities.

American Lung Association

“The Lung Association urges that the legislation not promote the combustion of biomass. Burning biomass could lead to significant increases in emissions of nitrogen oxides, particulate matter and sulfur dioxide and have severe impacts on the health of children, older adults, and people with lung diseases.
http://www.nobiomass.org/Documents/ALA_national_letter.pdf

Massachusetts Medical Society

“Biomass power plants pose an unacceptable risk to the public’s health by increasing air pollution... The burning of biomass releases small particles into the air creating particulate air pollution. Epidemiological studies have demonstrated an association between elevated particulate air pollution levels and adverse health effects and death. Particulate air pollution is associated with increased cardiopulmonary symptoms, asthma attacks, days lost from work due to respiratory disease, emergency room visits, hospitalization rates, and mortality.

“Biomass combustion also releases nitrogen oxides, which help create ozone, a highly reactive oxidant gas. Ozone reacts in the pulmonary airways causing symptoms of chest pain, shortness of breath, cough, wheeze, increased susceptibility to infection, declines in lung function, increases in asthma attacks, increases in asthma medication use, increased rates of emergency room visits for respiratory disease.
<http://www.massmed.org/AM/Template.cfm?Section=Search&template=/CM/HTMLDisplay.cfm&ContentID=33653>

Massachusetts Breast Cancer Coalition

“Massachusetts has the 4th highest breast cancer rate in the country...Of particular concern to the breast cancer community about this [Springfield] plant is the release of toxic chemicals like dioxin and polycyclic aromatic hydrocarbons (PAH’s) into the air in communities already experiencing needlessly high rates of breast cancer.”
http://www.springfieldincinerator.info/content_downloads/Mass%20Breast%20Cancer%20Coalition.doc

North Carolina Academy of Family Physicians

“Biomass burning of poultry litter and wood wastes creates emissions of particulate matter that research has shown increase the risk of premature death, asthma, chronic bronchitis, and heart disease. This burning process also creates numerous byproducts, including nitrogen oxides and volatile organic compounds that increase smog and ozone, which are known to increase lung disease and mortality; sulfur dioxides which also contribute to respiratory disease; arsenic which can increase the risk of cancer; mercury which can increase the risk of brain and kidney disease and affect the developing fetus; and dioxins which may increase the risk of cancer, heart disease, diabetes mellitus, developmental delays in children, neurotoxicity, and thyroid disease.

“These health effects would increase disability and death in all age groups, but particularly in the most vulnerable—developing fetuses, newborns, children, those with chronic illness, and the elderly. As a result of this increased disability and disease, medical costs in the state will increase.”
<http://forums.e-democracy.org/groups/mn-politics/files/f/302-2010-0502T165944Z/Final%20Letter%20of%20Concern%20Regarding%20Biomass%20Burning.pdf>

Anti-Biomass Incineration and Forest Protection Campaign

www.energyjustice.net

Florida Medical Association

“The Florida Medical Association urges state government to adopt policies to minimize the approval and construction of new incinerators including mass-burn, gasification, plasma, pyrolysis, biomass, refuse-derived fuel and other incinerator technologies, and to develop a plan to retire existing outdated incinerators.” <http://floridiansagainstinincineratorsindisguise.com/2009/12/21/58/>

II. There is no known safe limit for emissions of particulates from biomass incineration and current regulations will not protect the public from the risk from existing and proposed facilities.

- PM 2.5, or fine particles, have a diameter that is 2.5 microns or smaller. These particles are released directly from sources such as forest fires and other combustion sources. These particles can remain suspended in the air for a long time because of their small size. With PM 2.5, every combustion unit – industrial boiler, school bus, truck, lawnmower, fireplace, wood boiler, etc - is a source of fine particulate matter. <http://cfpub2.epa.gov/ncea/cfm/recordisplay.cfm?deid=87903>
- The U.S. EPA’s Clean Air Scientific Advisory Committee, established under the Clean Air Act to provide scientific advice on setting air quality standards, states “*there is clear and convincing scientific evidence that significant adverse human-health effects occur in response to short-term and chronic particulate matter exposures at and below 15 µg/m³, the level of the current annual PM_{2.5} standard.*” (CASAC 2006). <http://www.epa.gov/sab/pdf/casac-ltr-06-003.pdf>
- Air pollution affects the growth of lung function during the period of rapid lung development between the ages of 10 and 18 years. (Gauderman *et al.*, 2007)
- Children’s Health study (CHS), which began in Southern California in 1993, included more than 6000 public school children. Many research papers emerging from this study have produced findings showing that exposure to air pollution in the region has resulted in increased school absences, asthma exacerbation, and new-onset asthma. (Kunzli *et al.* 2003)
- Data from the American Cancer Society (ACS) cohort estimated that for each 10-µg/m³ increase in annual average exposure to PM_{2.5}, long-term all-cause, cardiopulmonary, and lung cancer mortality were increased by approximately 4%, 6%, and 8%, respectively. *The relationship between PM_{2.5} and adverse health effects was linear and without a discernible lower “safe” threshold.* <http://circ.ahajournals.org/cgi/content/full/109/21/2655>
- Data from all North American studies demonstrate that this curve is without a discernible threshold below which PM concentrations pose no health risk to the general population. <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=58003>
- Moreover, because a number of studies have demonstrated associations between particulate air pollution and adverse cardiovascular effects even when levels of ambient PM_{2.5} were within current standards, even more stringent standards for PM_{2.5} should be strongly considered by the EPA. <http://circ.ahajournals.org/cgi/content/full/109/21/2655>