



Hampden District Medical Society

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I speak tonight as a physician and President of the Hampden District Medical Society.

Last week, the Executive Committee of the Hampden District Medical Society unanimously voted to formally oppose the construction of the Russell Biomass power plant.

After reviewing the anticipated air pollutants generated from the combustion of the various wood fuels and taking into consideration the weather patterns and pre-existing air quality of the Pioneer Valley, the committee determined that the power plant would present an unacceptable public health risk.

According to data presented in the *Pioneer Valley Clean Energy Plan* and at a hearing of the Department of Public Utilities held in August of 2008, the proposed biomass plant would annually produce:

- 212 - 244 tons of nitrogen oxides
- 83 - 117 tons of sulphur dioxide (SO₂)
- 39 tons of particulate matter (PM_{2.5}/PM₁₀)
- 243.1- 245 tons of carbon monoxide
- 32 tons of volatile organic compounds (VOC)
- 632,180 tons of carbon dioxide

The medical and scientific evidence associating air pollution with a range of health problems is irrefutable. We live in an area that is already failing in air quality, and according to American Lung Association data, almost half of the population of Hampden County is considered at risk from the effects of air pollution. The ramifications of an increase in health problems related to increased air pollution would be far reaching in terms of personal loss, decrease in the of quality of life, loss of productivity, and increased healthcare expenses. Allowing the production of more air pollution for a small increase in electricity would simply be an unhealthy decision.

Hundreds of well designed medical research studies clearly link air pollution with significant health problems. Detrimental long-term health effects of air pollution include chronic respiratory disease, lung cancer, and heart disease. Air pollution has been linked with damage to the brain, nerves, liver, and kidneys. The elderly and children are especially susceptible to the effects of air pollution.

In 1995, Dr. David Bates, an internationally recognized pulmonologist, published a study concluding "air pollutants have been documented to be associated with a wide variety of adverse health impacts in children. These include increases in mortality in very severe episodes; ... an increased general rate of mortality in children; increased acute respiratory disease morbidity; aggravation of asthma... increased prevalence of respiratory symptoms in children, and

infectious episodes of longer duration; lowered lung function in children when pollutants increase; lowered lung function in more polluted regions; increased sickness rates as indicated by kindergarten and school absences..."

Last year, cardiologist Dr. Robert Brook published a review article outlining the adverse cardiovascular effects of air pollution in the journal *Clinical Science*. In particular, he focused on the effects of particulate matter (PM). In his paper, he cites 142 other scientific papers that studied the association of air pollution and health issues. He states "...studies from across the world have consistently shown that both short- and long-term exposures to PM are associated with a host of cardiovascular diseases, including myocardial ischemia and infarctions, heart failure, arrhythmias, strokes and increased cardiovascular mortality."

In January 2009, the *New England Journal of Medicine* published "*Fine-Particulate Air Pollution and Life Expectancy in the United States*". Springfield, MA was one of the 51 U.S. metropolitan areas that were included in the study. There was a correlation between higher levels of particulate air pollution and decreases in life expectancy. The authors concluded "A reduction in exposure to ambient fine-particulate air pollution contributed to significant and measurable improvements in the life expectancy in the United States."

In April 2009, the American Lung Association rated the air quality in Hampshire and Hampden Counties as "F" based on levels of smog, short-term particle pollution and year-round particle pollution for the period 2005 to 2007. According to the *Republican*, EPA data reported Hampden County had 36 days which exceeded health standards in that period. This morning, the ALA's State of the Air website 24 hour Particle Pollution grade for Hampden County was a "D".

The geography of our valley increases the risk of collection of air pollutants. Meteorologist and American Lung Association board member Nick Morganelli stated "The weather here will only act to maximize the potential hazards such as low-level ozone and non-dispersion of NO_x and other gases... There is no question from a meteorological standpoint that emissions from the proposed power plant exiting from a 300 foot stack would often be trapped at very low levels in Russell and even in Westfield due to any inversion situation..." The simple fact is that the valley often acts like a covered bowl, preventing dispersion of air pollutants, resulting in their concentration.

As a physician, I serve to protect the health and well being of my patients. As President of the Hampden District Medical Society, I serve to represent the 1,000 plus physician members and the health of their patients. In that consideration, I reiterate that the Russell Biomass Plant presents an unacceptable threat to the health of the citizens of the Pioneer Valley.

Thank you.



James K. C. Wang, M.D., F.A.C.O.G., C.C.D.