

EFSS COPY

## Some health Risks of the Clear River Power Plant

**Noise-** According to Invenergy they can meet the Burrillville noise ordinance a level BELOW 43 dB. However the expert The Town of Burrillville hired indicated that would be an impossible task. They reported that at an average run time noise could not be below 55 dB (equates to the sound of heavy traffic) and during start up and shut down which is about 2 hours each session the noise level could be 80-90dB ( equates to jet plane at takeoff). The expert indicated that the loudest times would be would be about 11 pm and 5am (each for a 2 hour period). This is unacceptable to the quality of life of the surrounding residents.

The World Health Organization (WHO) documents seven categories of adverse health effects of noise pollution on humans. There here is general agreement that exposure to sound levels below 70 dB does not produce hearing damage and above 85 dB the damage is related to sound pressure and time of exposure. This would mean Invenergy's bulk of time though a problem would not lead to hearing loss however the range 55dB to 85dB has been associated with primary sleep disturbance resulting in mood changes, difficulty concentrating, anxiety , fatigue especially with the elderly, young and mentally impaired being at higher risk. (1).

A growing body of evidence confirms that noise pollution has both temporary and permanent effects of endocrine and autonomic nervous systems. Noise acts as a biologic stressor causing reactions that prepare the body for flight or fight responses thus making the cardiovascular system at risk, specifically raising blood pressure and heart rate. These results begin at 65dB. Sudden unexpected noise has been shown to causes shift in electrolytes, increased levels of epinephrine, nor epinephrine and cortisol. Rise in these levels correlate to heart disease. Studies suggest that this biological response does not abate over time no matter how long the exposure. In simple terms your body does not "get use to it".

The degree of annoyance produced by noise may vary by time, intensity, duration and controllability or lack thereof coupled with individual sensitivity, anmely in the young, elderly and ill like at Zambarano Hospital which is just 1 mile north of the proposed Invenergy facility. So overall nosie pollution ( above 55 dB)

are a disruption of one's property, peace of mind, enjoyment of solitude with suggested health risks as per the World health organization.

## EMISSIONS

According to Invenergy own proclamation a gas fired plant will result in healthier clean air by replacing coal fire plants elsewhere. (2) We the people of Burrillville tend to not hold that to be true. Indeed like other Invenergy plants the proposed air emissions will not exceed the EPA standards for air quality however according to Reto Giere PhD of the University of Pennsylvania, "if you live in a plume for 20 years nobody knows what the guideline values are. They are just made up. You can't make experiments that long. These guidelines and values are just best judgments and not based on experiments."

Previous studies have shown that among 90% of the residents within 2-3 mile radius of a gas fired plant commonly document symptoms of asthma, allergies coughs, nosebleeds, dizziness, weakness, and rashes. Birth defects and leukemia are also cited. (3) Interestingly the EPA standards were met in these cases cited above. The power plant that was studied responded that emission dispersal and dilution does not appreciably impact the air quality. Seems we have heard that also, however Brown (4 Cohen UTNE) notes that not all smokestack emissions go elsewhere. Weather variations alter wind direction causing looping that brings plumes back down near their origin. Brown also states, "fugitive" or fine particle emissions escape from other parts of the plant as well. Although the Emission reduction credits purchased by a power plant to offset the carbon print may be from miles away( over 300 miles in some cases) the concentration of the pollution is concentrated in the area of origin.

Fine particulate matter ( PM2.5) exacerbate cardio respiratory ailments as well as linkage to potential harm to fetuses. Women exposed to high levels of particulate during their third trimester shows a baby's risk of autism doubles as documented in Environmental health perspectives periodical written by Harvard researcher Joel Schwartz. In new England they also found increased rates of mortality all

causes for the 65 and over age group. According to the American Association of Nurse Practitioners Smart Brief April 2016 and The Wall Street Journal studies connect air pollution to cancer mortality and premature birth defects. A fine particulate matter study published in Cancer Epidemiology found that for every additional 10 micrograms per cubic meter of particle pollution translates to a 22% greater risk of dying from any kind of cancer, and a 42% higher mortality risk for upper digestive tract cancers, and a 80% higher risk for breast cancer. I have not even touched on the MBTE problem here.

I leave you with this food for thought..... Environmental expert David Brown formerly Chief of State of Connecticut Environmental Epidemiology and Occupational Health researches areas around fracked gas infrastructures and predicts they will eventually become superfund sites. He states seeing superfund sites is the saddest thing because they usually result from the oversight failures of local government. With that I ask that this oversight board reject the application of Invenergy for the Clear River Project.

Fine-particle pollution linked to wider number of cancers, premature births, Washington Post, To your health, 2016.

Studies connect air pollution to cancer mortality, premature birth risks, American Association of Nurse Practitioners Smart Brief, May 2016.

Cancer mortality risks from long term exposure to ambient particles, Chit Ming Wong et al, Cancer Epidemiology Biomarkers & Prevention, May 1, 2016.

40 million dollar lawsuit filed against Invenergy over wind farm. East County magazine, Miriam Raftery April 29, 2016.

A small town and the effects of air pollution, UTNE Reader, Jessica Cohen, Fall 2015.

Noise pollution : a modern plague, Medscape Nurses, from South Medical Journal 2007 287-294, Lisa Goines RN.

Clearing the air on Invenergy power plant emissions, The Times Tribune, May 24, 2015.

Christopher Watson  
303 Jackson School House Rd  
Pasco, RE 02859