

The Human Cost of Energy on the Cheap

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On March 12th, the [New England Journal of Medicine](#) published an article entitled “[Long-term Ozone Exposure and Mortality](#),” analyzing 448,850 subjects over an 18 year period. The authors found that prolonged exposure to ozone and/or particulate matter increases mortality rates. Every 10 ppb (parts per billion) of additional ozone raises the death rate due to respiratory disease by 4%. This study adds to literature that already documents increases in asthma and heart attacks when ozone levels peak.

Here in Mecklenburg County, we are often 20ppb above EPA limits and double the levels of much of the country. Based on ozone alone, our mortality rates from respiratory disease would be 8% above what it would be if we met the EPA standard and up to 20% above many US cities. Ozone in our community comes from two primary sources – internal combustion engines and coal-burning power plants – both of which have become central to the way we live. Cheap gas and cheap electricity have spawned an economic boom with inefficient automobiles and off-road vehicles supporting sprawling roadways and developments built with little regard for conservation or efficiency. And it is killing us.

It’s time we had a serious conversation about the interplay of economic development, transportation, energy policy and health. For too long we have failed to recognize that there are consequences to the way we have grown: congestion, challenging air quality, and socially isolated neighborhoods just to name a few.

Regarding natural resources and economic development, we all know that coal, oil and other hydrocarbon fuels are finite resources that require increasing cost and risk to procure. It’s in our best interest to find renewable sources of energy now, and to promote their development right here in the Carolinas. Green jobs abound to retrofit existing

buildings and create new resources, jobs that can't and won't be outsourced. Furthermore, many businesses suffer in recruiting because of our current air quality. My medical practice has lost at least two great recruits in part because of air quality and their children's asthma. There are many reasons businesses choose to come to Charlotte. Wouldn't pristine air quality be a great one to add to the list? I think that should be part of the conversation.

I'm no expert on energy demand and production. But if we know that coal-burning power plants are dangerous to our health, then we should go to great lengths to reduce consumption before we expand capacity with that technology. Aggressive conservation programs have worked in other cities. If we do it here, we will have more time to plan for the next generation of rapidly developing alternative technologies. To put it in a physician's context, if you have diabetes, I can either feed you more and more pills to treat it, or I can help you lose weight and exercise to take away the disease. Maybe we should cut the fat out of our energy consumption before we start expanding capacity. At least that should be part of the conversation.

There are those who say that cleaner energy and cars will be more expensive. Well, that all depends on how you look at it. The current cost of a kilowatt doesn't take into account those extra people who die of respiratory disease or are affected by asthma and heart attacks. It doesn't take into account the loss of our Appalachian mountaintops or the risk of empowering unpredictable foreign oil producers. And it doesn't account for businesses that choose not to relocate to our region due to air quality concerns. Economists call those things "negative externalities", that is, the extra costs of a good or service that don't show up in the price you pay but have a negative unintended impact on society as a whole. If you consider that, the true cost of our current sources of energy seems pretty high even though the price isn't. I think that should be part of the conversation.

Energy is precious. Our current methods of getting and using it are hurting our economic viability, our quality of life and our health. We need a conversation about building less car-dependent and better connected neighborhoods, about intentional, careful and conservative use of energy – about changing the way we live. I hope the conversation begins today.