

## Energy Alternatives

The current debate in the US is all about the advantages of natural gas and the price that is paid environmentally.

Personally I do not like to see gas development in Garrett County. My wife and I have too much invested in the County and cannot let it be impacted by a potential risk.

This debate begs the question "What's the alternative?"

Many will say "Renewable Energies" But it has its problems. For example, one of my favorite issues is "Suppose you cover the Arizona desert with solar collectors. What's their impact?" I say that this will cause a change in the climate because sand temperature will drop 10's of degrees resulting in much cooler air which in turn causes winds, brining in clouds, etc.

I have been following wind energy for 30 yrs, and they still have to depend on government tax-breaks to be profitable. Keep in mind that a turbine is capital intensive and that the materials it is made of require a lot of energy, high temperature energy, to produce. Wind turbines, if in sufficiently large numbers, take energy out of the air, slowing down the flow of air, which in turn affect weather systems. Nothing is for free.

From a thermodynamics (study of energy science) point of view, ALL forms of energy are destructive (increase entropy). The question is how can mankind on earth survive the longest (we need energy to survive).

One of my favorite energy forms is geothermal. It is constant and there is plenty of it ( as with everything, there are limits of use). I see the whole gas drilling industry as going eventually in the direction of being able to drill deep enough to tap the earth's thermal energy from pretty much any location. It would be very environmentally friendly.

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