



ENERGY EFFICIENCY • DX-GEOTHERMAL • PV (PHOTOVOLTAIC)

Mr. Jerry Farrell, Jr.  
Commissioner  
Department of Consumer Protection  
Room 103  
State Office Building  
165 Capitol Avenue  
Hartford, CT 06106

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I am speaking to new regulations being drafted by the State of Connecticut Department of Consumer Protection concerning well drilling and geothermal installations. I am an architect and designer and integrator of renewable energy systems into buildings and for over 26 years.

When monopolies stifle competition, consumers loose. Great ideas have transformed the way we heat and cool our homes and buildings from the Franklin stove to the sterling engine. Now we have the first generation geothermal systems that have been using slow conducting plastic pipe filled with a mixture of water and glycol facing competition from fast conducting copper pipe and eco safe refrigerants called the direct exchange system. The efficiencies gained from this innovation appears to be a threat to the first generation designers, because instead of going back to their lab to improve and invent, they have tried to stifle and slander the new technology. This time not only the consumers loose, but the energy independence of our country and even the planet looses to cheaper and more carbon intensive fossil fuel systems.

If the first generation geothermal proponents want an example of how they can use their large bore drilling equipment investment, they can see how one Direct exchange company Earth To Air Systems took the same 6" bore hole and instead of putting the same plastic and water circulating system in there, used copper pipe, R-410A a high efficiency eco safe refrigerant. They then filled the hole with a high conductive grout to almost double their systems efficiency over the first generations method.

Where there is competition for innovative products and creative marketing, consumers will learn why geothermal can save them money, while reducing their carbon footprint. The participants in the industry must contribute to, and adopt fairly crafted legislation to safeguard groundwater. This can be accomplished by grouting the top of the bore-holes. It is important for the entire industry to build consumer confidence. This will contribute to consumers seeing a viable competitive market that they can trust to deliver on their hope for energy independence now.

Respectfully yours,

A handwritten signature in cursive script, appearing to read "Darek Shapiro".

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