Dear Santa Fe County residents:

I want to share with you my views on a vital part of our new Sustainable Land Development Code, which is the result of over two years of work and community input on The Plan, upon which The Code must be based. The Green Building Code is essential to our planning for a sustainable future for the next several decades in Santa Fe County.

Let's start with a reality check: The cost of energy for heating and cooling homes, as well as for keeping on the lights, has been increasing inexorably over the past decade. Utility bills are getting to be a larger and larger fraction of the cost of living in a home. I don't see this trend turning around anytime soon.

Making sure that new homes are energy efficient will pay off greatly in the future. However, a builder may not always be motivated to make a home secure and efficient; after all, the builder and his or her family aren't necessarily going to be living in the home. It is also important to note that many different families live in a residence over its lifetime, so most occupiers have no say in how it is built. And if they buy a home that requires major retrofitting, it will give them pause before they tackle an onerous "This Old House."

The cost of features added to a home when it is built, like extra insulation and double-pane windows, can be amortized over 30 years in the mortgage payment. Studies have shown that the amount saved in utility bills can often be significantly more than the added amount in the mortgage payment.

Erik Aaboe, County Energy Specialist, did an analysis on the extra cost of a home that included energy efficiency measures to reach a HERS (Home Energy Rating Scale) rating of 70. To explain, an average home built with standard methods today is considered HERS 100. As the energy efficiency of a home <u>increases</u>, the HERS rating <u>decreases</u>; thus, a HERS 70 home is 30% more energy efficient than a HERS 100 home. (The state of New Mexico already requires that new home construction be HERS 89.)

Erik calculated that adding the following energy efficiency measures up front -- when the home is being built -- would cost $3870 for a home that uses natural gas ($4370 for propane):

- energy-efficient double-pane windows
- compact fluorescent lighting
- efficient water heater tank
- efficient furnace

The reason for the difference in upfront cost is that the (natural) gas company gives rebates -- unavailable to propane customers -- for installing efficient appliances, such as water heaters and furnaces.

The added cost to the mortgage for the natural gas home is $20.75 per month ($23.50 for the propane home). But here, at last, is where the good news comes in: The homeowner using natural gas <u>saves</u> $26.50 per month, and the homeowner using propane <u>saves</u> $129 per

month. (For now, and likely for some time, propane is much more costly than natural gas, which isn't available everywhere in the County.) So the two homeowners are ahead by $5.75 and $106, respectively, per month. I will also note that a builder can improve the HERS rating of a home by merely siting it intelligently with respect to the sun, in order to take advantage of passive solar gain in winter. This usually costs nothing extra, although the topography of some lots may make that option less feasible.

I would be glad to send along Erik's complete analysis as an attachment to those of you who respond to this email, indicating that you would like to dig into the gory details.

The important point is that reaching a HERS 70 for a new home is not difficult, and it pays off immediately! However, there are builders who do not want to be held to this higher standard. These are the ones who are using the excuse that it will hurt people who are just trying to scrape together the money to buy their first home. But these are precisely the people who need to think of all the costs of living in a home -- not just the cost of the mortgage.

Also, whereas the mortgage cost stays fixed (especially now that variable-rate loans are not popular), the cost of energy will undoubtedly increase over time. This means that going forward into the future, the homeowner in a more energy-efficient home will be more and more ahead of the game.

One other concern for some people is the cost of performing a HERS rating itself (roughly $800). While most people can afford this extra cost, those seeking to buy homes in the affordable-home category may need help from the County. Already, the County helps such people with costs in many other ways, so that the cost of a HERS rating could come out of the County's affordable housing funds.

Let me just end with a story: When my husband and I moved into our current home, we did not realize that the interior wiring was partly aluminum instead of all copper, a little detail that the inspector we hired missed, too. The copper wiring at the outlets had been spliced onto cheaper aluminum wiring in the interior, which was allowed by code at the time that our home was built in 1964. A couple of years after we moved in, shorts began to occur, especially in sockets that were heavily used. One day, we heard a loud pop! and saw that a short had left burn marks on the paint around a socket. Over time, any junction between copper and aluminum builds up corrosion in the aluminum, and the results can be quite alarming, or even cause fire inside a wall. My husband and I had to spend a great deal of money to rewire the interior of our home; it wasn't a "lifestyle choice"; it was a matter of safety.

This practice of using cheaper aluminum wiring is now against code in New Mexico -- with good reason. At the time when outlawing the practice was being considered, it is probable that some builders complained that using all copper was going to cost people more money, and that banning aluminum wiring might keep some people on the financial edge from being able to afford a home. (This often happens when new regulations are put in place.) But the truth is that "cheaper" aluminum wiring ended up costing future homeowners a great deal of money to retrofit.

Now, in the age of dwindling energy resources -- and therefore, increasing costs -- what about the new homeowner who can just barely afford the already-built home that they have bought? How are they going to come up with thousands of dollars to heat and cool their homes over the next several years? (Not to mention the even greater, and increasing costs of retrofitting energy efficiencies.)

I believe that, bit by bit, more energy-efficient homes will be required across the country. This will be equivalent to the spread of safety regulations for home building that took hold in the last century, when, for example, people decided that it wasn't a good idea for homes to burn down due to faulty electric wiring. So, the question is: Does Santa Fe County want to be a leader in this area? Or are we going to be a follower in the national trend?

I hope you will agree that we need to be thinking ahead and not living in denial. A forward-thinking Green Building Code is really just good, old-fashioned common sense. It's up to you, the citizens of Santa Fe County, to be actively involved in seeing that the Sustainable Land Development Code comes to fruition in the next few months.

So, that's my take on the new proposed green building code. And now, let me wish you all a Happy New Year in 2012!