

IN FAVOR OF AFFORDABLE, ABUNDANT ENERGY

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July 28, 2009

When discussing public policy, it is helpful to first define one's goal – as the saying goes, you're only likely to hit the target if you aim at it.

The current goal of those currently in power in Washington seems to be to “green” the energy supply, and to wean ourselves off of unfriendly, insecure, or environmentally damaging sources of energy. Cost, reliability, and trade-offs seem to have become secondary considerations, if they are considered at all.

So, from the left we're told we need to eliminate fossil fuels, regardless of cost, while from the right, we're told we need “all of the above,” regardless of cost.

We know where this kind of hasty, non-economic thinking leads us, which is to debacles like wind farms that fail to produce energy when it's most needed, and to corn ethanol, which started its journey into our gasoline supply as an additive to reduce conventional pollutants, then, ostensibly as a way to lower greenhouse gases from automobiles.

Instead, what we got was more expensive fuel, more expensive food, more air and water pollution, more fresh-water consumption, more chemical pollution, and, in the ultimate irony, more greenhouse gas emissions than we'd have gotten just sticking to straight gasoline.

And once on paths like this, it becomes hard to diverge. Case in point: despite broad understanding of how horrendous corn ethanol is for the environment, the Waxman-Markey bill now before Congress would prevent EPA from issuing a determination that corn ethanol does not qualify as a “renewable” fuel for at least five years while they “study” the issue. Didn’t the democrats previously call things like this a delaying tactic?

And just imagine when we’ve given out billions of dollars in emission credits that only grow more valuable as the emission cap lowers over time. Is it even remotely conceivable that the entrenched interests we would produce with cap-and-trade will allow the regime to fall, the caps to relax, or the prices of permits to drop? I don’t think so.

I would argue that our goal should be to maximize the availability of less-expensive energy, while being environmentally responsible. Not environmentally pristine, but responsible, and there’s a large difference there. Environmentalists would have us be environmental pristine, not causing damage to any part of the environment, no matter how remote from human habitation. They object to damage of the environment *per se*, and would have humanity tread the Earth without leaving footsteps. That is an impossible goal that is also tremendously wasteful of the abundant natural resources that the Earth provides us.

Should we avoid harming people and property through environmental contamination? Absolutely.

Should we strive to limit un-necessary environmental destruction? Certainly.

But should we leave our most inexpensive forms of energy sitting in the ground while people are energy- and economically-deprived

both in the US and especially in developing countries? I don't think that's a morally sustainable choice.

The bottom line is, without an ever-increasing supply of energy, there is no way to maintain or improve our own living standards, much less that of our lower-income citizens, and the world's energy-starved people in developing countries, 1.6 billion of whom have no electricity at all.

Energy is the life-blood of our civilization. Harnessing fire influenced our evolution, shaping the size of our brain, the shape of our teeth, the length of our digestive tract, and most likely, our need for large quantities of body hair.

Modern human beings are obligatory energy users. Everything we make is made with energy, it's shipped with energy, maintained with energy, and as often as not these days, requires energy to operate. Without energy to cook, heat and cool homes, grow food, and manufacture goods most of the world's population could not be sustained.

When a human is stranded, they need three things most urgently: water, fire, and shelter. Food actually comes in a distant fourth.

Let me give you some examples of how omnipresent energy is in our lives. My colleague Aparna Mathur and I took a look at the amount of energy that is inherent in the things we use. What we found might surprise you.

It turns out that nearly half (46 percent) of total energy used in the United States is consumed indirectly, through production of foods, medicines, and consumer goods. The highest level of indirect energy consumption is in health care services and pharmaceuticals, and the second highest is in food production and preparation. At

the other end of the spectrum, religious activities and education consume relatively little indirect energy.

Put in monetary terms, Americans in 2003 spent about \$40 billion for the energy content of food, \$18 billion for energy used in transportation, \$10 billion for the energy used to supply them with entertainment, \$10 billion for the energy used in providing them with healthcare, and \$9 billion for the energy used in manufacturing housing. Aggregate indirect energy expenditures totaled \$113.2 billion.

Proponents of renewable energy would have us increase these costs, rather than decrease them, but renewable energy is something of a red herring. It has its place in niche applications, but it is not a meaningful part of an energy policy aimed at providing abundant and affordable energy.

In fact, I'd like to take this opportunity to coin a new acronym for renewable energy which is DRIP. It's Diffuse, Remote, Intermittent, and Pricey.

By *diffuse*, I mean that it requires concentration to make it useful. Whether it's gathering up corn or biomass, concentrating sunlight, or running air through millions of windmills, you have to put quite a lot of energy into concentrating renewables before they're good for anything.

By *remote*, I mean that the largest sources of renewable energy are far from where our most energy-hungry populations live. People don't live in the desert much, nor in Yellowstone, nor in the wind corridor in the center of the US. That means endless miles of new transmission lines, with attendant cost, environmental obstruction and damage, and line losses.

By *intermittent*, I refer to the fact that the wind doesn't always blow, nor the sun always shine. What that means is that you need both storage and redundancy, both of which boost the cost of renewables considerably.

All of these issues, the need to concentrate, transport, backup, and store renewable energy make it quite *pricey*.

In conclusion, we are at a cross-road when it comes to energy policy. In one direction, we can expand our production of affordable, reliable energy, enriching current and future generations, or we can leave the value of fossil fuels buried in the Earth, handing our descendents an energy system that is more costly and less reliable. Renewables have their uses, but they are, by and large, a distraction from what I believe our goal should be, to expand, as much as possible, our supply of affordable energy, to remove distortionary subsidies and mandates from our energy markets, and to allow those markets to find the optimal time for us to move away from fossil fuels into other forms of energy production.

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