



Resolutions To Action

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Clean Energy — A Tricky Business with Possibilities

Lucy Slinger, FSPA, PhD

FSPA Congregation Ecological Advocate

EXPERIENCE

Is your response denial, despair or hope when you pay \$4 a gallon for gas, see food costs continue to rise, and daily hear of the uncertain, fluctuating economy? In the United States all are tied to increased energy needs that historically have been dependent on cheap, readily available fossil fuels. Transportation uses 37% of our energy while production of electricity requires 40% more to sustain our lifestyle. We are, in fact, only one-fifth of the world's human population but use 23% of the global energy diet (World Population Organization).

In 2007 only 2.5 percent of USA energy came from "clean" renewable sources like solar, wind, geothermal, and biomass while more than 70% came from fossil fuels and 20% from nuclear sources. When "clean energy" sources result in lower human health risks, reduced dependency on foreign oil, creation of new green jobs, and lower contributions to global warming compared to traditionally fossil fuels, then what keeps us from choosing them? Furthermore, what can we do individually and collectively to generate and demand that more

"clean energy" be made available and used in the USA?

SOCIAL ANALYSIS

A tricky business of "clean energy" relates to looking only at the dollar value of input and production for our energy systems. Nothing is free. Even a solar panel or wind generator require resources and energy to make and maintain and are considered sustainable only if the energy production exceeds the initial and ongoing input costs. Little if any cost considerations have been given to what economists call the "externalities" such as long and short-term environmental, human safety, or social justice impact expenses (Suzuki, 2004).

Growing energy needs are considered a national security issue, with wars being fought to try to safeguard a future supply of foreign oil. Domestic tax breaks and government subsidies programs have been developed to keep fossil fuel exploration, development, and delivery systems functional. This system has only resulted in widening the gap between the "have" and "have nots" of our society and resulted in a disproportionately higher amount of income being spent by the latter to meet basic needs today.

Some conclusions emerge from the analysis of complex "clean energy" research: conserve and limit use; localize and limit loss due to transportation; diversify sources to strengthen stability of the delivery system; and depend predominately on multiple "clean" source systems to provide our nation's energy.

What are some facts that about energy generation? First, our transportation system is 97% dependent on petroleum with more than half imported and major new domestic reserves located far off shore. Second, a car using petroleum fuel that gets 20 miles per gallon (mpg) emits about 50 tons of global warming-inducing carbon dioxide over its lifetime; a 40 mpg vehicle generates half

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LCWR
8808 Cameron Street
Silver Spring, MD 20910
301-588-4955
fax: 301-587-4575
mlucey@lcwr.org

LCWR
www.lcwr.org

as much; and a fully alternative electrical vehicle contributes only indirectly in proportion to the electrical energy taken from the electrical power grid (National Resource Defense Council). Third, alternative biomass fuels, such as corn-based ethanol and vegetable or soy diesel contribute less than 2% of the energy used in transportation today with natural gas and other fuels contributing even less. However, bio-fuel sources are suspect as “clean” energy sources given conventional farming practices, which are highly subsidized and heavily dependent on fossil fuel-based fertilizers and pesticides for production, transport and processing, in addition to social justice implications of taking agricultural land out of food production in a system that transports what consumers eat on average more than 1500 miles.

Today’s transportation energy uses are surpassed only by the 40% consumed to provide electricity (Energetics). *The Summary of Statistical Yearbook of Electrical Power Industry 2006-2007* reports that 48.6 % was generated from coal, 19.4 % from nuclear, 21.5 % from natural gas, 5.8% from hydropower, 1.6 % from fuel oil, 2.5% from renewable resources (wind, solar, and geothermal) and the rest from miscellaneous sources. Each of these sources extracts an environmental and social justice price that is not accounted for in what consumers pay for electricity. The fuel source for generating electricity is only one piece of the “clean energy” picture; generated energy is useless until transported and used by the consumer.

Residential consumers annually use approximately \$200 billion and manufacturers use \$100 billion in energy. Residential appliances including heating and cooling equipment consume 90% of all home energy used. The US Environmental Protection Agency and Alliance to Save Energy document that replacing just one incandescent light bulb with an energy-saving compact fluorescent bulb means 1,000 pounds less carbon dioxide is emitted in the atmosphere and \$67 is saved on energy costs over the bulb’s lifetime. Solar water heaters offer the

largest potential saving to home owners by reducing water annual water heating expenses as much as 50 – 85%. But, even with tax incentives in place, most of us are slow to make changes.

In summary, clean energy is not just about alternative renewable energy fuel sources. What is most needed is a change of heart, attitudes, and practices that surround the status quo USA fossil fuel-based energy and economic systems, and change of the economic decision paradigm from a dollar-cost-only benefit to “triple bottom line” economics, i.e., financial, social, and environmental costs. This is the economic decision base used in a number of European nations today that more justly defines the true cost of energy, products and services.

REFLECTION

God has blessed our nation with abundance, and we have enjoyed the power and prestige of being world leaders. While that leadership is now in question, our lifestyles have been the standards that many in developing nations envy and seek. We are called to use our gifts wisely, and like the stewards in the parable, we will be held accountable.

Pope Benedict XVI has set a standard by establishment of clean alternative energy systems in Vatican City, and by

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reestablishment of a forest in Hungary to offset pollution caused by Vatican use of fossil fuel energy. Last March, Archbishop Gianfranco Girotti of the Vatican *Apostolic Penitentiary* which deals with matters of conscience, announced that “new” mortal sins of our modern times include causing environmental blight, i.e. pollution and social and economic injustices.

These are serious calls to accountability and action with the economic connec-

tions expressed explicitly by Vatican *Apostolic Nuncio* Archbishop Migliore in his October 25, 2006 presentation at the United Nations: *“The world’s economy continues to rest basically upon its relation to nature, and in particular to its impact on the earth’s soil, water and climate...It is becoming rapidly ever clearer that if these, the world’s life support systems, are spoiled or destroyed irreparably, there will be no viable economy for any of us... Environmental concerns have to be understood as the basis upon which all economic – and even human – activity rests. The environmental question is not only an important ethical and scientific problem, but one that impacts political, economic, security strategy, developmental and humanitarian issues at regional, national and international levels.... In a word, the world needs an ecological conversion so as to examine critically current models of thought, as well as those of production and consumption.”*

ACTION

Personal Action

- Be a prophet of change by using your vote and voice to generate political change for “triple bottom line” economy decisions and “clean energy” legislative support.
- Do a personal energy audit to determine ways you can conserve.
- Educate yourself and others about “triple bottom line” economics and “clean energy.”
- Pray, act, and invite others to live in sustainable right relations with all of God’s creation.

Collective Action

- Become shareholders in key energy suppliers to promote “clean energy.”
- Become better stewards of resources by conducting energy audits and modeling energy conservation practices in housing, transportation, ministries, and all other daily life and institutional needs.
- Be the change you seek.