

Concluding Remarks By Tom FitzGerald
Energizing Kentucky Conference, June 4, 2008

Web Site: <http://www.energizingkentucky.org/>

Dr. Leonard Peters, recently appointed Secretary of the Energy and Environment Cabinet, and Tom Fitzgerald, Director of the Kentucky Resources Council, gave the concluding talks at the first conference. As Dr. Peters said, they were given the ludicrously large task of “summing up everything that was said at the conference and setting the agenda for the next two conferences.” In fifteen minutes each!

Tom Fitzgerald’s remarks follow. After working with the Appalachian Research and Defense Fund in the 1970’s, in 1984 he established the Kentucky Resources Council, a nonprofit legal, research and policy assistance program that represents “those who bear the brunt of our energy policy decisions. Our clients are those who live downhill, downwind and downstream and who pay dearly the hidden costs of the ‘footprint’ of energy extraction, beneficiation, utilization, and disposal of resulting wastes.” Fitzgerald is a 1980 graduate of UK’s College of Law and is an Adjunct Professor of Energy and Environmental Law of U of L’s Brandeis School of Law.

Pearse Lyons was absolutely right in underscoring that this time of crisis is also a time of great opportunity. We have reached an important point in Kentucky’s energy and utility policies, standing with one foot in the past where adding value for the coal industry was the preeminent political concern, and the other at the threshold of a carbon constrained future. It is a

future that demands that we account more honestly for the costs of our energy choices, that we reevaluate our production and wasteful utilization of energy and that we invest in energy strategies and choices less damaging to the land, air and water of our Commonwealth, and more capable of sustaining an economy and quality of life over the long term.

There are several “drivers” that have created a new environment hospitable to energy efficiency investments – the “fifth fuel” that Sandra Meyer noted is the cleanest and most affordable answer to our energy needs:

- * Increased and increasingly volatile energy prices,
- * Tight delivery capacity for energy supplies,
- * Increased urgency in responding to climate change,
- * Growing consumer and investor concern regarding energy industry responsibility,
- * Accelerated pressure from global competition, and
- * The rapid pace of technological advancements (ACEEE 2008).

There is general consensus within the scientific community that emissions of greenhouse gases should be reduced by 60-80% by mid-century to minimize irreversible effects of climate change. There is also general scientific consensus that we have a relatively brief period in which to restructure the manner in which we produce and consume energy, before the exigencies of climate change will impose even more dramatic costs on our communities and our economy and narrow our options to mitigate, rather than adapt to, climate change. As Pearse Lyons noted, it’s time to “get going.”

And while we occasionally hit a pothole on the road to planning for a carbon-constrained future, conferences such as this provide an opportunity for critical dialogue, better understanding of the interests, needs and

potential roles of each constituency, and for consensus-building. Sandra Meyer talked of building policy bridges and technical bridges, and she is right. Both are needed (unlike some other bridges that will go unmentioned) and both will cost money. I can assure you, however, that waiting to begin on building those bridges will cost more dearly in the future.

The economic implications for Kentucky of the coming national carbon mandate such as that proposed in the Lieberman-Warner bill or several others now pending before Congress, will be significant. As a state that both produces a significant amount of coal and which is 98% dependent on coal and other fossil fuels for electricity, Kentucky ratepayers will see significant increases in electric rates as utilities seek to recover costs associated with reduction in carbon emissions or internalization of carbon costs. The sticker shock, and the potential adverse effects on the most vulnerable ratepayers and on our economy, *if* we fail to plan now and to invest now in a strategy to reduce carbon emissions from the combustion of coal for electricity through efficiency improvements and diversification of supply sources, will be staggering.

Just as the overwhelming weight of the scientific community acknowledges climate change as a phenomenon, there is growing consensus in the business community and in local governments, as well as Congress, on the need to reduce greenhouse gases. The debate is no longer whether we should slow, stop and then reverse loading of greenhouse gases into the atmosphere, but is how *quickly* we should move and how the costs should be allocated. We don't have until 2020 to take action, for as the Climate Action Partnership noted in its "Call to Action":

each year we delay action to control emissions increases the risk of unavoidable consequences that could necessitate even steeper reductions in the future, at potentially greater economic cost and

social disruption. Action sooner rather than later preserves valuable response options, narrows the uncertainties associated with changes to the climate, and should lower the costs of mitigation and adaptation.

The General Assembly as a body has begun to understand and acknowledge that there will be a national policy response to climate change and specifically, towards a mandatory program of controls on emissions of greenhouse gases from fossil fuel utilization. In the 2007 Special Session and the 2008 Regular Session, the General Assembly took several very important steps towards a rational energy future, commissioning a report on carbon emissions, research and strategies; creating a center for renewable energy and energy efficiency; requesting a study on reform in utility regulatory policy; enacting a set of incentives for renewable energy and energy efficiency; and using the financial clout of the state to set the bar much higher on the performance of state-funded buildings.

I'd like to recognize the hard work, vision, and leadership of Majority Leader Adkins, and his "co-conspirators for change" – Reps. Moberly, Pasley and Pullin, along with House Leadership and the Senate partners who helped shepherd House Bills 1 and 2 and other energy-related measures through the Senate – Senators Stivers, Jensen, Harris, and Leeper.

We have some basic needs, and the universities, as well as the community colleges and technical schools, are well-positioned to help address those needs.

First, and foremost, we need honesty and transparency. Honesty in how we measure the value and costs of our energy choices and transparency in how we account for those costs. Within the narrow bandwidth that has been defined as "low-cost, high reliability," the PSC has performed well the function assigned it by the General Assembly.

Yet it is increasingly apparent that the manner in which we have defined “cost” and accounted for, or failed to account for, elements of that cost has had dramatically negative consequences, and the bill is coming due for the failure to have fully costed our energy choices. As was discussed in panel C, **all** energy choices have a footprint and need to be viewed comprehensively on a life-cycle basis, considering such issues as the potential conflicts between food and fuel, and energy production and other land uses.

It is very disappointing, in reviewing the record of the pending Section 50 case before the Public Service Commission, that some still advocate that our utility policies should exclude health, environmental and social costs from consideration in pricing energy. We need to provide additional meaning and depth to resource planning, in order to more fully value efficiency and pollution in our choices for energy. These historic “externalities” have a nasty way of eventually becoming internalized in ways that are less efficient and more costly to the ratepayers, as add-on adjustments for particulates, mercury, SO₂, and now CO₂. Utility resource planning processes that fully cost the fuel choices and energy approach in life-cycle terms will more honestly value fuel diversity, congestion relief, reliability enhancement, environmental and cost-savings benefits that clean energy and energy efficiency provide.

Sandra Meyer noted a concern among utilities in avoiding paying twice – once for auctioned carbon credits and again for the investments needed to make the reductions. There is a parallel concern from the ratepayers that deployment of new capacity now will cost twice – once for the construction and again for controls once the carbon mandate is imposed. Spend **once** on efficiency now, and you can avoid paying twice.

It's important that we face the issues and not lapse into denial. We are not victims of some conspiratorial scheme to transfer wealth to the coasts. We are instead reaping the bitter harvest of energy policies that failed to fully cost our fuel choices, and it ill-serves us to espouse "real pricing" on one hand while advocating avoidance of measures that would require accounting for the full range of fuel costs by pricing pollution. We do the public, and particularly those I represent who have underwritten our so-called "cheap" coal-fired electricity and who are least able to withstand increases in electricity rates, a great disservice by failing to acknowledge that national action to reduce carbon emissions is a virtual certainty within the next few years, and that what has historically been our strength is, in a carbon-constrained future, our great vulnerability.

Until the Congress acts to establish the carbon targets, the greatest value of our fossil fuels may be in the ground, where geologic carbon remains sequestered *in situ* until technological solutions to minimize extraction and conversion impacts are better developed. The time has come to make our top energy priorities a real and sustained investment in energy efficiency and in diversifying our energy portfolio. Investment in efficiencies in transmission, generation and consumption of power, and research and deployment of more efficient transportation systems that make us less rather than more reliant on fossil fuels is the prudent path, and in deed, the only path in the near term.

If we act prudently, there are opportunities for the Commonwealth both to mitigate the impact of the carbon mandate, and to retool our economy for a carbon-constrained world. Our keynote speaker was right that the most important area in which state investment can help hedge against the near-term impacts of a mandatory carbon reduction program is energy efficiency.

According to several studies, investment in many cost-effective technologies can reduce consumption by 25-30% over the next 20-25 years. Investment in improving efficiency of conversion and use of energy offers a way to “mine” inefficiencies in the way that power is generated and consumed and to buy important time as the framework of the carbon mandate is constructed and as technological improvements in the capture, conversion, and management of various fuels are refined.

The good news is that there are abundant opportunities to mine out inefficiencies on both sides of the meter. According to the Energy Information Administration, 67% of the 41.8 quadrillion Btus of energy consumed for electricity are lost – 3% in line losses, the remainder in waste heat. Kentucky’s electricity rates remain relatively low-cost, but our bills certainly are not, because we consume power inefficiently. In 2005, there were 20 states with lower monthly residential electricity bills than Kentucky’s. In that year, Kentucky’s residential ratepayers consumed more electricity than our counterparts in 43 other states; our businesses, more than 19 other states; and our industries, more than counterparts in 47 other states.

There is a tremendous untapped potential in all sectors for greater efficiency. While some representing the industrial sector in utility matters suggest that the industries are already operating efficiently, the presentations by Mike Larimore of Ford and Carl Kurz of Toyota suggest otherwise. That Toyota could save \$600,000 each year on an investment of \$1 million for the third upgrade of their lighting, speaks volumes.

In House Bill 1, the General Assembly sent a clear message – until a utility has demonstrated that all cost-effective DSM strategies have been deployed, including investment in energy efficiency, no new capacity should be approved. Energy efficiency investment, coupled with deployment of

renewables, will buy critical time and allow avoidance of risky investments in new coal-fired base load or expensive natural gas-fired supply before the carbon targets and timeframes are adopted.

In House Bill 2, the General Assembly directed that the Governor's Office of Energy Policy produce recommendations on a renewable portfolio standard (RPS). It was disappointing that the office, in response to the Section 50 Report, recommended against adoption of a mandatory renewable portfolio standard out of concern that "a mandatory requirement in Kentucky would impose undue burdens on ratepayers, especially those on low or fixed incomes." A 2008 report analyzing the rate impacts of 12 state RPS's concluded that rate impacts have been under 1.2%, and in some cases there may have been no rate impact at all (Ryan Wisser and Galen Barbose, Lawrence Berkeley National Laboratory, *Renewables Portfolio Standards in the United States: A Status Report with Data Through 2007*, April 2008) . Renewable Portfolio Standards help to create a stable demand to attract capital for expansion of renewable energy. Diversifying supply sources through investment in renewables will help blunt the impact of the coming carbon mandate on low and fixed-income consumers; failing to do so will create a far greater burden.

What else can the Universities and Colleges bring to this process beyond honesty and transparency?

Sound information and research.

If we are to chart a rational energy path, we need to put to rest certain myths and misconceptions.

We need to dispel the myth that "opportunities for renewable energy in Kentucky are limited." In fact, there is a significant potential for greater deployment of renewables, including some 40 MW of hydropower potential

on existing locks and dams on the Ohio and Kentucky Rivers, and a largely untapped opportunity for solar and distributed generation in the residential, commercial, institutional and industrial sectors the Commonwealth. Wind power capacity expanded by 45% in 2007 alone, with 5,244 MW installed nationwide. DOE reported that an ambitious program of investment in wind could provide 20% of the nation's electricity by 2030. Kentucky should be investing in renewables – in production, in the manufacture of components, and in the training of researchers, scientists and engineers to help advance the technological improvements needed to more efficiently harvest renewable energy.

We need to put to rest the myth that we can “balance” environment and economy and replace it with what Sandra Meyer noted is the “harmonizing” of economy and environment – we cannot sustain an economy unless we live within our ecological means.

We must dispel the myth that any lunch is free. All energy choices, and the failure to choose rationally, have costs.

Universities and colleges have the capacity and ability to produce high quality energy information – for industries, business, for homebuilders, architects, homeowners, and government. They are well positioned to:

- * measure efficiency gains
- * help each sector determine what are the most effective areas of energy efficiency investment
- * inventory carbon emissions and develop methods to verify reductions
- * educate the media and the public at large so that informed energy choices can be made

* get out the message that energy efficiency WORKS, and will assist in tailoring programs that work for the entire spectrum of users, from homes to schools, offices to industries, agriculture to commercial consumers.

Pearse Lyons' comments on the importance of education made me think of Alvin Marks, who died on May 25. Born in Brooklyn, the son of a lawyer (for which he can be forgiven) he received a BS in electrical engineering from Cooper Union, served in the Navy during WW II, and at the time of his death at age 97, held 122 patents, including several for alternative and low-cost energy sources. Kentucky needs to nurture in all of our children that sort of lifelong intellectual curiosity in the sciences.

We need a long-term, sustained commitment to education, research, and deployment of energy efficiency measures and renewable, sustainable energy supplies. A sustained stream of funding, through a public benefits fund or other mechanism(s) could provide needed investments in renewable energy, energy efficiency and energy conservation. Comparable investment in research and demonstration of renewables and energy efficiency for all sectors, including partnerships with business and industry, is needed in order to position our economy and our manufacturing base to accommodate and flourish in a carbon-constrained world. The ability and timing of the maturation of hybrid, fuel cell, and other technologies is not static, but is instead directly tied to the investment of funds and brainpower into addressing technical obstacles.

As Pearse Lyons noted, our next generation of engineers and scientists will more likely than not be homegrown, yet higher education is becoming increasingly unaffordable for many Kentuckians. The Energizing Kentucky initiative is a great start, but it will take more than a three-year effort. In the face of budgetary shortfalls, Kentucky's universities and colleges will have

to cooperate as never before in order to make wise use of the available funds for research and instruction in energy-related fields.

The colleges and universities have an important role to play in encouraging and advising on building smarter and greener. With almost half of the residential energy use in space heating, and with buildings accounting for nearly half of all CO₂ emissions, there is a huge opportunity for saving energy and dollars in retrofitting existing housing stock and improving new construction.

The universities and colleges need to engage on these issues as never before, contributing research and analysis as we incorporate load and demand management, real-time pricing and new ratemaking structures and approaches, into the energy field. A number of other states have moved from volumetric rate structure to other structures that better align utility cost recovery with consumer interests in efficiency and lower costs, and the higher education institutions can assist in crafting the structures needed to educate and empower ratepayers to control costs and energy use.

On behalf of my constituency, I want to thank the four institutions for their commitment and the businesses here represented, for their example. Our daunting task is to remain “competitive” in an economic environment where energy sources are more realistically “priced,” that is, where the life-cycle costs of production, transportation, utilization, and waste disposal (and particularly the costs of GHG emissions) are increasingly required to be internalized rather than shifted into the public domain. A sustained prioritization of efficiency in all sectors and in the conversion and utilization of energy, is critical to our success. I have no doubt that, if we can harness our collective brainpower and will, we will be up to this daunting task. Let us together face our tomorrows with hope and humility. Thank you.