“Nuclear Energy is Bad for Kentucky”

Statements from organizations supporting energy efficiency and clean, renewable energy rather than nuclear energy in Kentucky

February 13, 2009

Cumberland Chapter Sierra Club
Kentucky Conservation Committee
Kentucky Environmental Foundation
ASPI – Kentucky Solar Partnership
EcoPerspectives and Earth Healing
Kentuckians for the Commonwealth

Sierra Club Comments on the Unreasonable Cost of Nuclear Power
Presented by Rick Clewett, Co-Chair Cumberland Sierra Club
Political/Legislative Committee, February 13, 2009

Nuclear power is the most expensive way ever devised to generate electricity. The method is not anywhere near cost effective; nuclear plants in the states of Oregon, New York, Maine, Illinois, and Connecticut have been shut down because the owners found it was too expensive to keep them going. In recent years the industry has been trying to sell a new generation of nuclear plants, but these plants require huge government subsidies.

What would a new nuclear power plant cost? The short answer is no one really knows. Earlier this year Florida Power and Light estimated its proposed nuclear plants would cost $8,000 per kilowatt of capacity or $24 billion for two plants. But that's just a guess. Given the volatile economic situation, it is not even possible to accurately predict the cost of building a nuclear power plant today. That's the conclusion arrived at in a recent Moody's report entitled: *New Nuclear Generation in the United States:* "We believe the ultimate costs associated with building new nuclear generation do not exist today and that the current estimates represent best estimates, which may change" (energybizinsider, June 23, 2008).

What these estimates do not even try to include is the long-term cost of disposing of spent nuclear fuel, if that ever becomes possible, health, or insurance costs

The Governor's Energy Plan itself acknowledges that increasing construction costs or falling natural gas prices could render nuclear plants uncompetitive by any standards:

> Uncertainties about future construction costs or natural gas prices could deter investment in nuclear power. In particular, if construction costs for new nuclear plants proved to be as high as the average cost of nuclear plants built in the 1970s and 1980s or if natural gas prices fell back to the levels seen in the 1990s, then new nuclear capacity would not be competitive, regardless of the incentives provided by EPAct (Energy Policy Act). Such variation in construction or fuel costs would be less

> likely to deter investment in new nuclear capacity if investors anticipated a carbon dioxide charge, but those charges would probably have to exceed $80 per metric ton in order for nuclear technology to remain competitive under either of these circumstances. (p. 107)

The figures don't add up. A carbon charge of $80 per ton is not likely any time soon. And the financial crisis has made companies very slow to take on large new debt, while it has made banks even slower to lend.

So what does the Governor's plan recommend? It recommends large scale subsidies and incentives to shift the risk of building new nuclear plants away from the companies and onto the state—that is, onto the tax payers of Kentucky.

But let's look a little more at the cost assumptions used by the Governor's Plan. Relying on a 2008 Congressional Budget Office study, the Governor's Plan assumes that the levelized cost of electricity from nuclear plants build in the near future will be between 4.8 and 12.8 cents per kilowatt-hour. On the other hand Adrian Heymer, senior direction for new plant deployment for the Nuclear Energy Institute, a nuclear energy think tank, estimates that:

> Operating costs per kilowatt-hour for a new nuclear plant will be 30 cents per kilowatt-hour for 12 or 13 years until construction costs are paid down, at which point operating costs will drop to 18 cents. Harding adds those costs are a tough sell when concentrated solar power and wind power can be had for about 14 cents per kilowatt-hour (energybizinsider, June 23, 2008).

The state of Kentucky should be saving its incentives and subsidies for energy efficiency and renewable energy programs that will help us modernize our economy and make it more sustainable, while creating green jobs throughout the state rather than pockets of jobs based on a hazardous industry.

The Kentucky Conservation Committee's Statement on Nuclear Energy
Presented by Jack Wilson, February 13, 2009

Background

In the late 1950s Kentucky jumped to implement President Eisenhower's Atoms to Peace program and we were the first state to be permitted to operate a nuclear waste disposal site--Maxey Flats. Governor Bert Combs wanted to develop a nuclear park using Research Triangle Park as a model. Kentucky built one building to encourage nuclear companies to move to Kentucky (they didn't and the building was rented to the Council of State Governments for $1 per year) and a nuclear waste disposal facility.

It began leaking in the 1970's and Kentucky has been paying ever since. We currently spend close to $1 million to maintain the site and we are the Principle Responsible Party (PRP) on the hook under the Comprehensive Environmental Response and Liability Act (CERCLA) to pay for its final closure (estimates range as high as $100 million). This experience should be sufficient to contemplate where we want to go in the future. Maxey Flats has less than 1% of its waste originating in Kentucky. To build nuclear plants without a disposal plan opens the state to increased liability for future cleanups.

Companies come and go as we have seen in the past year, but governments continue indefinitely, and the law when it goes after responsible parties will ultimately seek redress from governments if there are no private firms solvent.

Kentucky Conservation Committee's Position

Our position is: The most viable source of energy and the one that will create the most green jobs for Kentuckians in Kentucky is energy conservation. This path has the greatest viability to meet energy needs by reducing demand. In the midterm (5-20 years) we should look at Kentucky-based renewable energy sources such as solar, biomass, hydropower, and wind. And only in the long-term begin to consider nuclear.

Nuclear energy, even if this bill passed, will not meet the short or midterm needs of the state and has the potential for significant liabilities. This is essentially what the Governor's plan lays out, but SB13 focuses on a long-term option that has a major component missing--the disposal issue. We need to have the discussion of how this will occur so we do not repeat the mistakes of Maxey Flats.

Appalachia - Science in the Public Interest:
Kentucky Solar Partnership's Statement on Nuclear Energy
Presented by KSP Director Andy McDonald, February 13, 2009

Renewables and Energy Efficiency are a Better Option for Kentucky than Nuclear Power

For over 30 years, Appalachia - Science in the Public Interest has been promoting solutions to our energy needs that are sustainable, safe, and protect public health and the environment. This has led us to support the widespread adoption of energy efficiency, green building practices, conservation, and renewable energy. It has also led us to oppose nuclear power, a position we maintain to this day.

The Governor's Energy Strategy presents us with a false alternative. It looks at a future in which climate change legislation shifts our electricity supply away from coal and concludes that renewable energy and energy efficiency are inadequate to meet our needs. And that nuclear power is therefore needed to replace coal.

This analysis is flawed for several reasons.

First, the Governor's Energy Strategy seriously underestimates the potential for energy efficiency and conservation to reduce our energy demands. The Governor's Strategy foresees Kentucky's demand increasing over the next 20 years, despite their proposed advances in efficiency.

Real world experience indicates that Kentucky can do much better than that. Many other states have decades of experience with energy efficiency programs, which prove the tremendous potential of this resource. The fact that Kentucky is one of the most inefficient states in the nation suggests that our opportunities for saving energy are even greater than those in other states.

In 2007 the American Solar Energy Society published a report, which detailed how the United States could cut its carbon emissions 60 – 80% by 2050, using existing efficiency and renewable energy technologies. This report, prepared by an assembly of respected scientists and engineers, concluded that energy efficiency alone could eliminate all projected growth in carbon emissions.

The Governor's plan also underestimates the potential for renewable energy. The renewable energy era has arrived – these are no longer technologies of the future. In 2008, more renewable energy was added to the US electric grid than any other energy source, and the solar and wind industries have been growing at remarkable rates for a decade.

Kentucky has good solar energy resources. We could produce thousands of megawatts of power from solar electric and solar hot water systems, distributed on rooftops across the state. This is happening in other states, and could happen here. New Jersey has the second largest market for solar electric in the country, with a climate very similar to Kentucky's.

We have other renewable resources here as well. Wind, biomass, and hydro can all contribute to our energy needs, and we need research and investment to develop each of these.

Developing renewables and efficiency will also generate tens of thousands of good jobs right here in Kentucky. Consider how much economic development would be generated by retrofitting hundreds of thousands of homes with energy-efficient appliances and solar panels. A study released in 2008 concluded that the solar energy industry alone will create over 400,000 new jobs in the United States over the next seven years. This compares with the 80,000 people employed in the coal mining industry today. Another recent report announced that the US wind industry now employs more people than the coal industry.

Nuclear power is not needed in Kentucky. Its risks are unacceptable and we have better alternatives, which are safer, cheaper, and ready to be deployed today.

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Statement from the Kentucky Environmental Foundation on Nuclear Energy
Presented by KEF Director Elizabeth Crowe February 13, 2009

The Kentucky Environmental Foundation (KEF) is strongly opposed to nuclear energy in Kentucky. Of all the energy options before us, nuclear energy would cost Kentuckians most dearly, in a number of ways.

First, the financial costs associated with generating electricity from nuclear power plants are significantly higher than generating electricity from clean, renewable sources like solar, wind, hydro, or from natural gas. It is higher still than the "first fuel" option of energy efficiency. As Kentuckians currently use higher rates of electricity than most all other states in the nation, energy efficiency is our best bet at reducing energy demand and lowering bills for customers, especially lower income families who need it most.

The financial costs of nuclear waste storage and disposal are even greater. A recent estimate by the Department of Energy for the proposed nuclear waste repository at Yucca Mountain, Nevada, is that 150 years of nuclear waste storage will cost nearly $100 billion dollars – around 67% higher than the 2001 estimate. The idea of pursuing expensive new nuclear reactors, plus the cost to taxpayers for storage of highly hazardous nuclear wastes, is simply unconscionable.

Second, Kentuckians should not have to pay the costs of greater safety and security risks associated with nuclear power. A catastrophic accident brought on by human error or technical failure, security breaches, worker exposures and the potential for a terrorist attack are risks too great to endure when they can be avoided altogether. Energy efficiency programs and renewable energy sources come with no such risks; windmills don't make waste, and solar panels don't compromise worker or community safety.

Third, nuclear energy does not follow the principles of environmental justice, to which KEF adheres. A nuclear power plant generating waste in Kentucky would not only affect Kentuckians' health and environment, but also have the potential of impacting that of every other community along a waste transportation route and around the designated storage site. Hazardous and nuclear waste dumps are typically sited in low-income communities and communities of color, which bear a disproportionate burden of ill health and environmental degradation. Sending some of our nation's most hazardous wastes to other community "sacrifice zones" is

unconscionable. Because there is no safe way of destroying nuclear waste, we should not be in the business of generating it.

KEF urges Kentucky legislators to reject nuclear energy due to the high costs to our economy, environment, health, and safety. With so many opportunities for electricity generation through clean, renewable energy and practical savings through energy efficiency, legislators should be enthusiastically supporting these options, rather than sinking money into nuclear energy.

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and

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Comments Written for the Meeting of the Kentucky Environmental Quality Commission, January 29, 2009
Presented by Mary Byrd Davis*

I should like to comment on Strategy 7 of Kentucky's *7-Point Strategy for Energy Independence:* "Examine the Use of Nuclear Power for Electricity Generation in Kentucky." This section of Governor Steve Beshear's plan reads like a piece of propaganda from the nuclear industry, for it is dotted with half truths, untruths, and omissions. The idea that residents of Kentucky will accept this document and be moved by it to facilitate the building of nuclear plants in the state is an insult to our intelligence. Kentuckians showed excellent sense in the past in rejecting the construction of nuclear plants in the state. I hope that they will understand that the presentation of Strategy 7 is unbalanced. I shall point some of the major flaws in the argument in roughly the order in which they occur.

NUCLEAR POWER IN THE WORLD

A theme of Strategy 7 is that nuclear power is enjoying a worldwide renaissance from which Kentucky cannot afford to be left out. As a matter of fact, the renaissance is an illusion. Worldwide the nuclear industry is on the decline.

The total capacity of the nuclear fleet worldwide increased 3 gigawatts a year between 2000 and 2004, 2 gigawatts a year between 2004 and 2007 and less than 1 gigawatt in 2008. Meanwhile, all electric generating capacity, including coal-fired plants, nuclear plants, and renewable energy, is increasing at an estimated 150 gigawatts per year. According to the World Wind Energy Association, wind generating capacity alone increased 14.9 gigawatts in 2006 and 19.7 gigawatts in 2007. Thus nuclear's increase of 2 gigawatts in 2007 is insignificant.

As of September 2008, 439 reactors were in operation across the world. The average age of these reactors was 24 years. The average age of the 119 reactors that have already shut down is 22 years. If one optimistically assumes that the reactors now operating (with the exception on behalf of the reactors in Germany where operation is limited by legislation) plus the twenty . . . .

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The complete comments are available at www.earthhealing.info/KYEnergyPolicy-Davis-EarthHealing.pdf and www.earthisland.org/ecoperspectives/kentucky.htm

KENTUCKIANS FOR THE COMMONWEALTH
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Action for Justice

Statement in opposition to SB 13

From: Doug Doerrfeld, former chairperson of Kentuckians For The Commonwealth
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Date: February 12, 2009

Kentucky's pursuit of nuclear power is every bit as wrong headed as the pursuit of so-called "advanced coal technologies." Nuclear power plants will be massively expensive, require large amounts of public funding and will produce large increases in utility bills. Like coal, uranium mining destroys the environment and human communities and creates extremely dangerous wastes for which there are no permanent storage facilities. This is the very definition of "Old Power."

Nowhere in America is the footprint of "Old Power" more obvious or prevalent than in Kentucky. Our economy is in permanent crisis, our democracy is hobbled, and our environment cannot sustain us. The pursuit of nuclear power will bring more of the same.

Kentucky needs a new direction. We need leaders who are willing to support investments in energy efficiency and renewable energy, promote worker training, and seize this moment in history to create tens of thousands of new green collar jobs.

Kentucky needs New Power, not SB 13.