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## Obama Focusing on Wrong Energy

[By J. Doyne Farmer](#)

In his State of the Union speech, President Obama wisely stated that we should stimulate the economy by investing in clean energy technologies. Unfortunately, he then presented a list of four technologies that the lobbyists want him to support, rather than those with scientific and economic merit.

Here's why President Obama's list is wrong:

- Nuclear power is expensive and dangerous. Current costs are many times those of coal, and they have not been dropping. The real cost is unknown, due to the Price-Anderson Act, which puts the burden of insuring nuclear power on the shoulders of American taxpayers. The magnitude of a possible accident is so large that no insurance company will take the risk. Doesn't this tell us something?

Widespread use of nuclear power at the level needed would produce vast quantities of plutonium, which we would need to protect for the next 25,000 years. To convert it to bomb grade just requires a little help from a country like Iran or North Korea. A nuclear explosion in Manhattan would make 9/11 look like a picnic. Any serious advocate of nuclear power should demand the repeal of the Price-Anderson Act. Then insurance companies would be forced to price the risk, and we would know the true cost of nuclear power.

- Offshore drilling for oil and gas. Excuse me, Mr. President, but did you misread the teleprompter? Oil and gas, together with coal, are the major causes of global warming. You said clean energy. Has to be a mistake.

- Biofuels require using farmland to produce energy. With the world's population heading toward 9 billion, we are going to need all of our productive land to produce food. Biofuels are inefficient, with a low yield of energy per acre of land. As with any form of farming, the biomass produced is shipped elsewhere, making it unavailable to support the biodiversity of local fauna. While there is a small role for biofuels from agricultural waste, farming for crops

specifically grown for biofuels is inefficient and environmentally unsound.

- Clean coal is an unproven technology with potentially serious environmental problems. There are no operating commercial installations. Disposing of the carbon dioxide that will be produced and keeping it trapped for thousands of years is a challenging problem — should we inject it into the earth's crust, put it at the bottom of the ocean, or turn it into solid form and hide it? In NASA's terms, the technology readiness level is very low, and the environmental and economic uncertainties are very high.

The technologies that Obama should have promoted in his speech are:

- Wind — It's as cheap as coal and is already at commercial scale, with relatively small environmental side effects. While it can't solve the whole energy problem, it can make an important contribution.

- Photovoltaic solar — It's a well-tested clean technology whose cost has dropped dramatically in the last 50 years. Projections suggest the cost will continue to drop to or below currently competitive price levels under full deployment.

- Concentrated solar — It focuses sunlight to heat a liquid and run a steam turbine. It is a simple technology, and unlike wind and photovoltaics, it is easy to store the produced energy. The cost of concentrated solar power from the few existing commercial installations is already comparable to that of nuclear power, and it will likely drop significantly under large-scale deployment. A small fraction of the land in the Southwest can easily provide energy for the entire United States.

- Efficiency — Energy use in the United States can be reduced by a factor of three at relatively low cost without lowering our standard of living.

What is the difference between my list and President Obama's? Wind, solar energy and efficiency do not yet have the powerful lobbies of oil, coal, and farming. His list reflects the desires of the large vested interests, while mine reflects science and economics. One hopes that President Obama's science advisers understand this, and that, in next year's State of the Union, he will have the courage to follow science rather than politics.

We need to develop clean energy technologies that can solve our energy problem at low monetary and environmental cost, rather than to subsidize the

large energy companies and the farm lobby at the expense of U.S. taxpayers and the Earth.

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