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Is nuclear power the energy of the future?

ECO Notes
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One would expect nuclear power to be a good alternative to fossil fuels since it doesn't release carbon dioxide, a major greenhouse gas that contributes to global warming. While it's true there are few carbon dioxide emissions from nuclear reactors, nuclear power's carbon footprint is massive.

Uranium mining, milling, processing, enrichment, fuel fabrication and waste storage cause so much greenhouse gas emissions that the Peducah, Ky., nuclear power plant is considered the largest emitter of ozone-destroying chlorofluorocarbons (CFCs) in the country.

Right now, a nuclear reactor must run 14 years at full tilt just to produce more energy than it depletes. Ultimately, what's true with fossil fuels is true with uranium. As uranium use increases, it becomes scarcer and therefore requires more energy to mine, eventually making nuclear energy a black hole that no longer justifies the energy it takes to produce it.

Our nation's energy plan is to ultimately switch to plutonium, the re-processed fuel from uranium plants. The type of Pandora's nuclear tower that may result from utilizing weapons-usable plutonium to provide our energy needs remains to be seen. Besides the security problems in a world concerned about terrorism, plutonium is much more volatile and difficult to control than uranium. It requires a hotter reactor, is harder to split, and it requires a greater use of water. The latent cancer rates from potential accidents are also dramatically higher.

The bottom line is that plutonium is more likely to go supercritical causing a catastrophic accident than its sister uranium, which has already led to several notable disasters in the past 30 years. In fact, there have been 200 cases of "near" accidents at U.S. reactors since the Chernobyl explosion in 1986. With plutonium, the chances of "near" becoming "real" are far greater, according to nuclear power expert, Mary Olson, who heads the Southeast Office of the Nuclear Information and Resource Service. Furthermore, in case of an accident, radioactive material could spread across 40,000 square miles.

What is often left out of financial reports is nuclear's true cost to taxpayers. It is currently estimated that each nuclear power plant's price tag is over \$4.5 billion. While virtually every nuclear power plant ever built was a result of private investment, these investments were ultimately defaulted upon by the power companies, resulting in taxpayers paying millions of dollars after the fact. New construction of nuclear reactors cannot be built without a massive infusion of public cash. It is unlikely that reactors will be built if power companies are forced to shoulder the costs.

Everyone acknowledges that our world is getting hotter and water is increasingly in short supply. I've lived in three distinct parts of the country over the past 15 years. In each place, a serious drought endangered my community, which, if it persisted, posed a serious threat to both human and animal health and well-being.

Whatever future energy sources our nation invests in must be able to function in a world of changing, potentially tumultuous climates. Nuclear power is considered by many to be the least compatible energy source for a turbulent climate. Nuclear power depends on the grid to run the reactor. If the grid fails, the reactor can't function and some worry that they could reach critical status if cooling systems fail.

Furthermore, for nuclear reactors to work they require cool water, which makes it suspect as water temperatures rise. Nine plants including those in Charlotte and Alabama were forced to shut down this summer due to high temperatures.

Nuclear power's insatiable thirst is demonstrated by a nuclear station located just south of Atlanta. The plant

consumes more water than the cities of Atlanta, Savannah and Augusta combined. Two-thirds of the water used is evaporated. According to Progress Energy, a nuclear generating station's single reactor uses 22,630 gallons per minute for cooling, half of which evaporates. Additionally, recent revelations of massive tritium releases from U.S. reactors and the contamination of groundwater in residential neighborhoods pose questions as to its "clean" reputation and its effect on water supply.

WNC may be the crossroads to the new nuclear superhighway. Under the current energy plan, a reprocessing center is proposed for South Carolina at an old bomb factory, which will convert radioactive waste for reprocessing. Interstate 40, I-26 and the newly proposed I-3 would be the gateways for potentially thousands of shipments of nuclear waste. Keep in mind that reactor waste contains materials with half-lives measured in tens of thousands, and some in millions of years. More than 12,000 human generations are required to reduce the hazard of these materials to acceptable levels.

According to Mary Olson, this country could solve most of its energy problems through energy efficiency programs. Europe spends 50 percent less on energy than we do, Japan uses less than a third. DuPont, not a vanguard of environmental protection, recently implemented an energy efficiency program that cost \$1 billion and saved \$3 billion with a net savings of \$2 billion. The bottom line is that energy efficiency programs will provide 7 to 10 times more carbon reduction than what nuclear power offers. By putting energy efficiency in the forefront of a new energy plan, we can do away with the need for alternatives that could be costly to human health, to our pocketbooks and our future.

An educated public is the best defense against irresponsible energy policies. But don't believe me, find out for yourself. ECO is sponsoring two programs this month to educate on nuclear power's viability as a future energy source.

On Saturday, ECO is sponsoring a field trip to the Oconee Nuclear Station, our closest nuclear reactor, located in South Carolina. We will tour the plant, ask questions and discuss the issues with plant personnel. Ten days later, ECO will host Mary Olson, the foremost authority on nuclear energy in the region, at 7 p.m. Oct. 30 at the Hendersonville Public Library. Please RSVP for the Oconee trip by calling ECO at 692-0385.

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