

Nuclear Is Bad for the Great Lakes

Don't be swayed by the multi-million dollar public relations campaign to revive nuclear energy. Recently, Christine Todd Whitman, former director of the EPA under President Bush and Patrick Moore, former Greenpeace co-founder have been employed by energy interests to hype nuclear power as a clean, safe, reliable and affordable energy source. The campaign has appeared in Michigan where DTE has proposed another nuclear plant at Monroe. The campaign claims that nuclear is the answer to global warming. It is none of these and in fact the opposite is true.

Nukes are not carbon free

While the operation of a nuclear plant is mostly carbon free compared to coal, the whole nuclear process from exploration, mining, milling, enrichment and transport produces significant carbon emissions.

The most damaging to global warming is the enrichment process which uses CFC-114 that is 9,800 times more effective as a global warming gas than CO₂ and lasts 300 years in the atmosphere. CFC-114 is also the most destructive chemical known to the ozone layer. U.S. Enrichment Corp. reported emitting over 3 million tons of CO₂ equivalents in 2004.

Heating up the Great Lakes

Nuclear plants, just like coal plants, use huge amounts of water. In fact 48% of all water use in the U.S. and the majority of water withdrawals from the Great Lakes are for power plants. At the Bruce Power nuclear complex on the Canadian side of Lake Huron (the largest nuclear complex in North America) 6 operating reactors suck up over 8 million gallons of lake water per MINUTE- and return the water to Lake Huron +4F warmer. Are these thermal plumes heating up the lakes preventing normal ice formation and increasing evaporation, thereby speeding up global warming? Could this be contributing to lower lake water levels?

During the heat wave of 2003 European nuclear plants had to shut down due to low water levels in the rivers causing the water to be too warm to cool the reactors. But the same events happened this past summer at a TVA reactor in Alabama. The continuing drought in southeastern U.S. again threatens nuclear power output. Also, in July 2006 the Cook Unit #1 near Covert, MI had to shut down for 2 days because of overheating. Just when you need power the most during hot summers, nuclear is most vulnerable.

Nukes are too dangerous

How easily we have forgotten Three Mile Island and Chernobyl. But here in Michigan we have had our own close calls. The 1960's book "We Almost Lost Detroit" describes how Detroit Edison's Enrico Fermi I had a near catastrophic meltdown. But in 1993 Fermi II was off line for more than a year after a turbine blade spun off causing immense damage as radioactive water accumulated in the building and was gradually released to Lake Erie.

We almost lost Detroit again in 2002 as inspectors found a football- sized hole in the reactor vessel at the Davis-Besse nuclear plant near Toledo, OH only 55 air miles south of Detroit. Inspectors claimed that the plant was perhaps only two months away from a core meltdown worse than Three Mile Island. Besides record civil penalties of \$33.5 million, a criminal trial is proceeding in Toledo that reveals possible cover ups by employees, First Energy Corp. and the NRC.

At the Palisades plant near South Haven in 2005 a crane holding nuclear waste over the spent storage pool was stuck for several days. If the crane had dropped the waste it could have released radioactive material over the state.

Besides accidental releases of radioactive substances, normal nuclear plant operation releases radioactive substances such as tritium to the air and water. The Palisades plant in December 2007 reported radioactive tritium in the groundwater between the plant and Lake Michigan.

Although the NRC claims these releases are within safe parameters, several studies point to elevated cancer rates near nuclear facilities.

No Safe Place for Nuclear Waste

After over 60 years of producing high level nuclear waste there still is no place to put it. The earliest possible opening date predicted for the Yucca Mtn. Storage site in Nevada is 2017, if ever. Meanwhile, Michigan's four nuclear plant sites have accumulated over 1600 tons of high level waste currently stored in huge pools of water or cement casks along the shores of the Great Lakes. This waste will remain deadly for another 100,000 thousand years.

But these plants also create thousands of tons of so-called low level waste that is still very toxic. Some of this waste ends up as DU (depleted uranium, "depleted" actually being more radioactive than the original uranium) coated weapons for our military. Some waste is now allowed to be recycled into metal and ends up in consumer products. More health and environmental problems are associated with the tailings and radioactive water from uranium mining. The impacts of uranium mining on the Native American population and the permanent poisoning of the land in both Canada and the U.S. is a tragedy.

How Affordable?

By any honest criteria, nuclear power is the most expensive option to generate electricity. New nuclear plants are estimated to cost between \$4 – 6 billion and take 10 – 12 years to permit and construct.

There is only an estimated 60 year supply left of high grade uranium ore worldwide. Recently, the price of uranium on the world market has skyrocketed. Some point to reprocessing nuclear fuel, but the National Academy of Science has urged President Bush to halt the DOE program to reprocess nuclear fuel as unsafe. So far, the DOE has refused.

Nuclear power cannot exist without huge taxpayer subsidy and having the public responsible for insuring the facilities from catastrophic events such as a meltdown. The new energy bill in the U.S. Congress provides more billions to the industry with interest free loans. The Congressional Budget Office estimates that 50% of these could end in default.

The new Enrico Fermi III proposed by DTE is an extremely unwise investment and will incur a huge cost to ratepayers. Instead, we need political leadership to forge strong legislation for energy efficiency and a high RPS (renewable portfolio standard) to prevent a global warming disaster. Alternatives such as wind and solar are becoming more competitive and are projected to cost less in the future, while coal and nuclear will increase in cost.

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