Nuclear Energy Information Service

Illinois' Nuclear Power Watchdog since 1981

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PRESS RELEASE

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Illinois Nuke Plant Can't Take the 'Global Warming' Heat – Automatically Shuts Down

CHICAGO—As if more evidence were needed that the Nuclear Renaissance is a mirage, Exelon's LaSalle 1&2 reactors automatically shut themselves down on one of the hottest days of the summer, according to NRC reports.

"This once again demonstrates how incapable nuclear power is of dealing with global warming conditions," observes Dave Kraft, Director of the Chicago-based Nuclear Energy Information Service, an Illinois safe-energy and nuclear watchdog organization. "Rather than saving humanity from global warming, it seems that we're going to have to figure out ways of saving finicky nuclear plants from global warming instead," says Kraft.

According to NRC documents[1], LaSalle units 1&2 automatically shut themselves down when temperatures inside the reactor building exceeded safe limits for operation. A similar incident occurred at the Donald C. Cook reactors in Michigan in the super hot summer of 2006, when the Cook reactors scrammed after exceeding heat standards.

"Just like in 1988 and 2005-06 in Illinois, and several years this decade in Europe, when nuke plants will be needed most to meet huge peak demand for electricity, they will be shutting themselves down instead," Kraft points out.

Reactors have also had to shut down because they dump too much hot water back into bodies of water –rivers and cooling lakes-- they depend on for cooling, also exceeding federal standards for thermal discharge. Over 80% of Illinois fresh surface water is used for electric power production – highest rate in the nation. Over 100 reactor-days of operation were affected in this manner in the 1988 drought in Illinois. The LaSalle reactors came within one day of a similar shutdown in 2006. This summer and in 2008, TVA's three Browns ferry reactors had their operation severely curtailed by EPA during the drought that hit the Southeast – they were thermally polluting the Tennessee River.

Steam-cycle thermal plants like nuclear reactors are also less efficient at producing electricity when the water they depend on gets hotter. A Union of Concerned Scientists paper[2] notes that, with higher ambient water temperatures in rivers and lakes, "…the effectiveness of the condenser in converting steam back into water decreases. As a result, steam is not "pulled" through the turbine as swiftly and less electricity is "cranked" out."

"This is not an energy system an economy or public health officials can depend on under weather conditions similar to those expected in a global warming world," says Kraft.

"Nuclear boosters like to taunt supporters of renewable energy sources by chiding, 'What are you going to do when the sun don't shine and the wind don't blow?' I guess they now have to confront the question, 'And, what are YOU going to do when the temps get too high, and the rivers don't flow?' We have the answer today – they will simply shut themselves down, leaving us to scramble for power elsewhere," Kraft notes.

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Nuclear Energy information Service is a non-profit nuclear power watchdog and safe-energy education organization.

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[1] Event Number: 46171, Aug. 13, 2010, http://www.nrc.gov/reading-rm/doc-collections/event-status/event/en.html

[2] "Nuclear Heat," Issues Brief, Union of Concerned Scientists, 2006. www.ucsusa.org