



NRC NEWS

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NRC TO FURTHER EXAMINE SOLAR FLARE ISSUES RAISED IN RULEMAKING PETITION

The Nuclear Regulatory Commission has determined its rulemaking process can appropriately consider a petition on maintaining the safety of used nuclear fuel at U.S. reactors if an extreme solar flare disables the electrical grid.

The petition, filed by Thomas Popik on March 14, 2011, suggests a massive solar flare could potentially disable large portions of the U.S. electrical grid for an extended period of time. The petition further suggests that nuclear power plants would then run out of fuel to power the emergency systems that maintain pools of water where used nuclear fuel is kept safe. Popik's petition asked the NRC to amend its regulations so that U.S. reactors would have backup spent fuel pool systems capable of operating automatically for two years without fuel resupply.

The NRC posted the [petition online](#) and took comments through early summer 2011. The staff has examined the comments and available information to analyze Popik's assumptions and proposed solution. The staff's analysis took into account how several agencies have an impact on both the electrical grid and responding to natural disasters. The analysis also considered existing research into solar flare effects on the grid, as well as into protecting transformers and other critical grid infrastructure, along with ongoing NRC efforts to implement lessons learned from the Fukushima nuclear accident.

The staff's [analysis](#) concludes the NRC rulemaking process can appropriately handle further examination of the issues in Popik's petition. The first step will be monitoring the progress of several Fukushima-related activities designed to enhance plants' abilities to keep spent fuel pools safe. If the staff concludes these activities fall short of resolving the petition's concerns, the agency will work to develop a technical basis for the petition's suggested rule change. If such a basis cannot be established, the NRC will update the public on why the petition's suggestions were not adopted.

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