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EPRI says EPA cooling water rule could force retirement of about 42 GW

By Wayne Barber

The Electric Power Research Institute warns that certain cooling water intake structure rules under consideration by the U.S. Environmental Protection Agency could result in early retirement of about 42,000 MW of generating capacity nationally.

EPRI officials offered the assessment both during a conference call that the organization sponsored Aug. 30 and in public comments that it filed recently on a draft rule implementing fish and marine life protection requirements for cooling water intake structures at power plants and industrial facilities under Section 316(b) of the Clean Water Act.

Under EPA options 2 and 3, which would require some or all plants to retrofit with closed-cycle cooling, "as much as 42,000 MW of generation could be lost because either they could not bear the costs or plants do not have sufficient space to install towers," EPRI said in its comments to the EPA.

EPRI estimates the increased cost of cooling towers could force the early retirement of about 26,000 MW, with another 15,600 MW likely to retire because of either lack of space or permitting issues for a total of 41,600 MW.

The industry-supported research institute also said there is generation in the pipeline in the five reliability regions to conceivably offset much of this loss. But an additional 8,693 MW of "currently unplanned generation would be needed to maintain electric system adequacy in three reliability regions due to premature retirements for economic reasons," EPRI said in its comments.

The Aug. 30 briefing was handled by EPRI Vice President for Environment and Renewables Bryan Hannegan; Senior Program Manager Water and Ecosystems Kent Zammit; and Technical Executive for Fish Protection Doug Dixon.

The EPA is seeking cooling water intake structures that reflect the best available technology to reduce killing so many fish and shellfish from "impingement and entrainment." The proposed rule would apply to all existing power plants that withdraw more than 2 million gallons per day of "waters of the United States" and use at least 25% of this water for cooling purposes.

Sen. James Inhofe, R-Okla., has attacked the rule as something that would drive up electric rates while providing "uncertain, if any, benefits."

Likewise, EPRI said it has reviewed 50 to 100 peer-reviewed technical papers on the harmful impact of cooling water impact structures and concluded there might be "little to no measurable benefit with the regulation."

The cooling water intake structure has a long and litigious history, which dates back to the 1970s, Hannegan said. In April 2009, the U.S. Supreme Court ruled that the EPA could use cost-benefit analysis in determining the best available technology. The case had been argued in December 2008.

Dixon said the EPA will issue the final rule in late July 2012.

"We could see a quite different rule from the proposed rule," Zammit said. Also, it is worth remembering that "the federal rule is just a starting point" for the states. The states can go beyond the proposed rule and some are likely to do just that, he said.

Industry has favored a flexible system that could tap options such as wedge-wire screens and traveling-water screens, depending on conditions at the affected site. EPRI's members represent more than 90% of the electricity generated and delivered in the United States, according to its website.