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EPA confirms GenX-related compounds used in solar panels - Carolina Journal

Dan Way Dan Way in CJ Exclusives

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FAYETTEVILLE — Although top national environmental regulators confirmed GenX and related chemical compounds are used to produce solar panel components, they say their research does not prioritize what risks that might pose to the environment and human health.

Peter Grevatt, national director of the Environmental Protection Agency's Office of Ground Water and Drinking Water in Washington, D.C., recently told *Carolina Journal* the GenX solar concern "is one that's in a much broader set of challenges."

GenX is known to be used in making Teflon film that coats many solar panels. The chemical falls under the larger umbrella of compounds classified as PFAS chemicals.

"There's literally so many thousands of these compounds, and we don't have methods to measure most of them. So we are getting up on the research, and trying to figure out ways of identifying what's out there," Andy Gillespie, associate director for ecology at EPA's National Exposure Research Laboratory in Research

Triangle Park, told *CJ*.

Kristina Beasley said that lack of knowledge underscores her concerns. She is among opponents of an expansion plan for the industrial-scale Wilkinson Solar Plant in the Terra Ceia community of Beaufort County. Their opposition is believed to be the first in the state to raise the issue of potential GenX contamination in an N.C. Utility Commission regulatory hearing.

"I definitely think that it is an issue, and further research, I think, should be done," Beasley said. She said the public doesn't appreciate concerns about toxic chemicals, fluids, and substances leaking into the soil and groundwater as solar installations age and deteriorate, or suffer damage from windstorms or other disasters.

As *CJ* pointed out more than three years ago, North Carolina doesn't have rules for decommissioning solar facilities or a disposal plan for spent panels. Critics worry about potential pollution. Residents consistently have raised fears in town halls and solar plant permit hearings about contamination from compromised solar panels.

But community activists are not the only ones weighing in. Donald van der Vaart, former secretary of the N.C. Department of Environmental Quality, who holds a doctorate in chemical engineering, sees reason for concern given North Carolina's more than 7,500 solar installations.

"North Carolina's solar power capacity is now the second highest in the nation. EPA researchers recognize that solar panels may be a source of GenX compounds," said van der Vaart, a senior fellow at the John Locke Foundation. "I would expect Duke Energy and the Public Utilities Commission would want to see test results to

protect them from future liability."

"One line of research that we are doing is looking at material management, end-of-life management, but we're not yet at the point where we're doing it product by product," Gillespie said when asked whether the EPA has concerns about GenX leaching from solar panels.

"Lots of things go to landfills, or go to incinerators, or other things. We're trying to understand the aggregate risk. We just haven't gotten to the stage of doing it by many of the thousand different products that these chemicals can be used in," he said.

"It's a fair question to ask" about potential environmental and human health impacts from GenX and other PFAS chemicals in solar panels, said U.S. Rep. Richard Hudson, R-8th Congressional District.

"Obviously I'm aware of the concern, and that's why I've been pushing to get the EPA to quickly get us as much science as possible so that we can determine how much of a concern we have," Hudson said. "There's not enough science, clearly."

Solar enthusiasts contend there is no threat from GenX or related chemicals, while critics fret the wealthy renewable energy industry and its host of lobbyists influence regulators and lawmakers to disregard potential GenX connections to solar panels.

"We've got to go where the science is," Hudson said. "If it's dangerous then we need to treat it. Prevention, and remediating the problem."

Hudson, Grevatt, and Gillespie were among EPA, N.C. Department of Environmental Quality, federal, state, and local

government officials in Fayetteville on Aug. 14 for an all-day listening session Hudson facilitated. The event was designed to update residents on regulators' efforts to investigate and combat GenX in the groundwater, soil, and air surrounding the Chemours chemical plant here, and to hear their feedback.

"GenX, I know, has been a significant concern for folks in the state of North Carolina," Grevatt said, "but we're really focused right now most of all on understanding potential threats to human health, and making sure that communities have the tools they need to address those concerns."

The EPA plans to issue a toxicity assessment outlining a first-of-its-kind health-risk profile for GenX and PFAS compounds next month. It's scheduled to release a national management plan by the end of 2018.

The EPA is collaborating with states, academic researchers, industry scientists, and other federal agencies to develop methods and tools for states and local communities to find GenX and other PFAS compounds in the environment.

"Those tools are going to be equally applicable to [assessing solar electric plants] as they will be about looking for GenX in other parts of the environment," Grevatt said. They won't be tailored to each specific threat.

Linda Culpepper, interim director of DEQ's Division of Water Resources, was a panelist at the Fayetteville event. Asked later if she was hearing concerns about GenX in solar panels, she responded: "Just what you're seeing probably. The same thing in research that people are looking at — as these products degrade over time are there any kind of chemicals coming from that?"

CJ asked DEQ for a response to concerns about GenX solar panel contamination. The agency's response is here.