Exhibit MB-54

https://www.virginiamercury.com/2022/04/18/youngkin-administration-sets-stricter-runoff-rules-for-solar-farms/

Youngkin administration sets stricter runoff rules for solar farms

9-11 minutes

---

by Sarah Vogelsong, Virginia Mercury
April 18, 2022

The Virginia Department of Environmental Quality late this March abruptly rolled out several major changes to how Virginia will manage stormwater runoff from solar farms, saying prior policies may have underestimated water quality impacts.

Previously, Virginia had considered only the foundations or bases of solar panels to be impervious surfaces, or those unable to absorb runoff. But under Gov. Glenn Youngkin's administration, the solar panels themselves will begin to be classified as impervious surfaces, albeit unconnected ones.

The distinction could have significant effects on solar development in Virginia, which has set ambitious goals for achieving a carbon-free electric grid by midcentury, including the deployment of large quantities of solar power.

But while the solar industry worries that the sudden policy shift could dampen efforts to build out renewables, some local officials and environmental groups say it could help better account for how precipitation, which is increasing in both frequency and intensity due to climate change, interacts with solar farms.

Virginia, like other states, has wide-ranging stormwater rules for new development because of the impact runoff from sites can have on erosion

and water quality. Stormwater concerns are particularly acute in the roughly 56 percent of the state that lies in the Chesapeake Bay watershed. There, the federal government has imposed targets Virginia must meet in reducing nutrient pollution, much of which comes from runoff.

In the March 29 memo announcing the policy change, Virginia DEQ Director Mike Rolband explained the move as an effort "to safeguard the protection of downstream waterways and properties as well as ensure consistency with [the U.S. Environmental Protection Agency's] Chesapeake Bay Program."

On Friday, DEQ spokesperson Greg Bilyeu said in an email that the previous administration of Gov. Ralph Northam had "ignored existing stormwater management regulations" and that "in their efforts to prioritize solar project development, they ignored concerns that have continued to be raised by local officials and key stakeholders."

DEQ did not provide specific numbers of stormwater violations linked to solar projects that have occurred, but several high-profile cases have made headlines over the past few years as solar development has accelerated. The most notorious concerned sediment pollution from the Essex Solar project in Essex County, which led to a settlement with former Attorney General Mark Herring's office and a $245,000 fine. More recently, problems with stormwater runoff from the Belcher Solar facility in Louisa County led owner Dominion Energy to apologize to the local board of supervisors.

Some environmental groups hailed the announcement. Bill Street, president and CEO of the James River Association, called the new policy "a common sense way to protect the health of Virginia's rivers and streams as the commonwealth transitions to the use of clean, renewable energy."

Patrick Mauney, executive director of the Rappahannock-Rapidan Regional Commission covering five north-central counties, said treating

panels as impervious is generally “something that most of our localities would agree with.”

“The rain hitting the panels can cause concentrated flow and cause erosion when it drips off the panels,” said commission planner Michelle Edwards. “That’s a concern.”

‘A shockwave through the industry’

Solar companies and industry representatives, however, reacted with alarm. Several told the Mercury they had no warning of the move and were caught off guard by such a rapid shift in state policy without the convening of a work group or advisory committee.

“The initial memo really sent a shockwave through the industry, especially with folks who had projects pretty far down the line,” said David Murray, director of solar policy for renewables trade group American Clean Power.

For developers, the primary concern is that by increasing the state’s calculations of how much impervious area is associated with a solar farm, companies will need to make heftier investments to offset their stormwater impacts. That could mean more land for drainage basins, additional infrastructure or the purchase of extra stormwater credits.

For those developers with projects already underway, the immediate effective date of the March 29 policy also sparked fears that plans would have to be redrawn on the fly.

“That can present challenges for projects that have already been permitted by the locality and state based on prior stormwater assumptions,” said Matt Gooch, a partner at Richmond-based law firm ReisingerGooch, which works extensively with solar projects. “It can present significant financial harm where a project has already entered into a power purchase agreement or interconnection agreement based on a system size that is no longer possible to build.”

Some members of the industry also argue it makes little sense to treat

solar panels as equivalent to impervious surfaces like parking lots, because such a designation doesn't accurately reflect sites' vegetated cover and how water travels through it.

The impervious classification "doesn't seem to account for probably what's happening literally on the ground as the rainfall falls off the panels and hits what's usually a pasture" or low-growth turf, said Williams Mullen attorney Speaker Pollard on a webinar held by the firm Thursday morning.

Exactly how stormwater interacts with solar farms and how its impacts should be quantified is far from settled. Some states, like Minnesota, classify the panels as impervious surface, in line with the administration's new approach. Others, like Maryland, do the opposite: there, a 2012 law says that only panel foundations or bases can be classified as impervious.

Given the range of policies in place on the issue, the federal National Renewable Energy Laboratory is currently leading research to evaluate how panels affect stormwater and water quality.

"The science of stormwater regulation was not … developed with the unique characteristics of large-scale PV installations in mind," found a recent report produced for the NREL project. "Permitting standards and processes can therefore be unpredictably variable for solar development, both increasing development costs…and diminishing water quality outcomes."

To Murray, that ongoing research "speaks to the importance of not issuing any regulation in this field until we have a robust understanding of how vegetation strategies and design practices affect stormwater management."

Sheep graze under a solar array. (Photo courtesy Solar Power World and Nexamp)

DEQ walks back implementation date

Following an industry outcry, DEQ released a new memo Thursday that

walked back the new policy's effective date by several years. Under the new guidance, only a solar project "that does not obtain an interconnection approval by a regional transmission organization or electric utility by December 31, 2024" will have to comply with the stricter stormwater requirements.

"The department recognizes the contractual, financial and other obligations with many utility-scale or community solar projects currently in design — especially for those in advanced stages of design or implementation," Rolband wrote in the April 14 update.

DEQ spokesperson Bilyeu said the new effective date was "consistent with the timing" of a state law recently signed by Youngkin that will require Virginia to analyze the impact of certain small- and medium-sized solar projects on forested lands and those with prime agricultural soils.

Bilyeu also noted that DEQ intends to develop a formal guidance document on the issue with "necessary stakeholder involvement."

Nevertheless, industry members said they remained concerned about the uncertainty caused by the memos and whether it could dampen the state's solar market.

According to Murray, American Clean Power has estimated that between 4.1 and 25.8 gigawatts of solar power currently under review for interconnection to the regional electric grid would be subject to the new stormwater rules, with "just over 800 megawatts that wouldn't be built because of this rule."

But Edwards said she "would be surprised if it discourages development," particularly given the existing glut of Virginia solar projects already in the regional grid's queue.

For solar developers, she said, "it comes down to a cost-benefit analysis to determine what that sweet spot is for how big does [a project] need to be to get a return on their investment."

Virginia Mercury is part of States Newsroom, a network of news bureaus

supported by grants and a coalition of donors as a 501c(3) public charity. Virginia Mercury maintains editorial independence. Contact Editor Sarah Vogelsong for questions: info@virginiamercury.com. Follow Virginia Mercury on Facebook and Twitter.