

Problems with the proposal ZTA 20-01 to open the ag reserve to commercial production of energy.

David Blockstein, Ph.D.

The proposal puts the cart before the horse. It assumes that Montgomery county's needs for solar energy can best be met by putting commercial solar operations in the part of the county that has been designated as an agricultural reserve.

However, this conclusion is not based on evidence.

In contrast the county's Clean Energy working group of which I am a member proposes a rational and analytical process to determine where solar should be located in the county. Our strategy (attached) states:

Goal 2 – Expand the use of distributed renewable energy.

Strategy 2.2 – Assess feasible public and private locations for solar and wind installations of various scales in Montgomery County and adjacent jurisdictions.

Action 2.2.1 – Develop a ranking system to categorize sites based on economic, environmental, and social considerations.

Action 2.2.2 – Evaluate financial incentives to encourage solar development on brownfields and other preferred solar locations.

This process would create a decisionmaking process based on economic, environmental, and social considerations and then determine which locations in the county best match these criteria.

Our recommendations with respect to the agricultural reserve state:

Strategy 2.5 – Support expansion of community solar.

Action 2.5.1 – Evaluate environmental and ecological impact of using land in the agricultural reserve for solar.

Action 2.5.2 – Establish demonstration projects to co-locate PV solar with agricultural production (such as grazing) and pollinator meadows.

These evaluations should be done before any decisions are made about whether to establish commercial solar in the agricultural reserve.

The draft introduction from our working group states very clearly:

“However, it would be counterproductive for the County to reduce greenhouse gas emissions by turning forests, farmlands and wetlands into industrial facilities for energy capture. These vegetated lands and the soil beneath are important in capturing carbon from the atmosphere, reducing the urban heat island and providing clean water, clean air, biodiversity and other ecosystem services. Preservation and protection of the environment should be an essential component of the County's shift to net zero.”

It is very unlikely that the County will need to open up the agricultural reserve to meet our demands for electricity. Attached is a presentation that was provided to our working group on our first day.

Slide 7 shows that 12,000 acres are needed to meet the county's current electricity use (2015 baseline) if we are to use fixed array solar panels.

Slide 8 shows that nearly 50% of the county is urban =158,000 acres. That is more than 10 times what is needed for current needs. Slide 9 shows that the county has 58,000 acres of impervious surface. This the acreage does not include vertical solar (solar walls and windows) which is being developed and deployed in Germany, NYC and Colorado among other places. Certainly not every acre of our urban area will be feasible for solar, but we can more meet our needs by rapidly solarizing every feasible surface in the built environment. But this should also be based on a thorough assessment.

In contrast, 21% of the county is agricultural (68,500 acres). The ecological impacts of taking 2% of this land and converting it into commercial solar operations is likely to have greater impacts than on the land that would be directly covered with solar panels because of increased roads and other developments associated with commercial development.

Yes, we have an emergency and we need to act now, but that does not mean that we should forgo analysis and leap to conclusions about where to best put solar generation facilities.