HORIZON SOLAR POWER

Kane County
Attn: Mark VanKerkhoff
719 Batavia Ave – Building A, 4th Fl.
Geneva IL 60134

Via email
cc. Keith Berkhout

November 20th, 2023

RE: Claims of Solar Impacts on Grape Vines

Dear Mr. VanKerkhoff,

At the September 12th public hearing for Petition 4616, a representative from the Acquaviva Winery vaguely claimed that solar would increase the air temperature of the area enough to have a negative impact on grapevines on their property, causing early bud break and increasing the vines' susceptibility to frost damage. No specific evidence to back this claim was provided. We do not believe there is any merit to their claim.

Michigan State University is widely regarded as the premier viticulture research and education institution in the midwestern United States. I spoke with Mike Reinke, Viticulture Specialist for the MSU Extension in Berrien County, one of the top wine growing regions of the Midwest. His bio is attached to this letter. On October 30th, 2023, I spoke by with him by phone and he stated that soil temperature, not air temperature, is the primary factor in bud break, and a one- or two-degree increase in air temperature "doesn't matter, I cannot see it mattering". He indicated that frost is always a risk for grapevines in the Midwest, and any claimed temperature increase from solar would "be lost in the normal temperature variation day-to-day or year-to-year." He also stated that a "tree buffer would absolutely reduce any temperature effect". Please note that we do indeed have such a tree buffer already proposed between our solar facility and the vineyard.

In a follow up email from Mr. Reinke on November 8th, 2023, he reiterated that solar would not materially affect a grape crop as close as fifty (50) feet away, and that "If, and that a big if, anything were to influence the temperature of an area by 1-2 degrees the impact on bud break timing would likely be extremely minor" (emphasis added). Further, "To put some scientific principles in the conversation, we quantify heat using growing degree days (GDD). … If I were to add 2 degrees to the high temperature to half the days in the couple weeks leading up to 15 April, the total accumulation would be an additional 7 GDD50. Therefore, IF the temperature influence were of that magnitude, the result would be a potential of one day in how much the grape bud break would

be sped up. That is rather minor when you can see soil temperature influence bud break by a week or more from year to year" (emphasis added).

Given the above, there is no quantifiable negative impact to grape vines attributable to this planned solar facility.

Sincerely,

Andy Melka
Director, Development
312-972-5055
andy@horizonpow.com

Michael Reinke

Contact Me

Viticulture Specialist
Berrien County Extension Office

Phone:
269-944-1477 x 210

Cellphone:
573-239-0808

Email:
reinkem3@msu.edu

Mike is the Michigan State University Extension Viticulture Specialist located in Berrien County. He received his PhD in Entomology from MSU and has several years of industry experience in insect monitoring, pheromone-based insect management, and insect behavior in agricultural systems. He helps growers with pest and disease management decisions on a wide range of fruit and vegetable crops.

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