

From: [Puco ContactOPSB](#)
To: [Puco Docketing](#)
Subject: public comment 20-1677-EL-BGN
Date: Monday, June 14, 2021 10:25:12 AM

Subject: Reference to Case No. 20-1677-EL-BGN - Health & Safety Issues

Solar Letter June 14, 2021

This is in Reference to Case No. 20-1677-EL-BGN

To all concerned,

I am writing today about my concerns for the Cadence Solar Energy Project that Invenergy is seeking the approval of the Ohio Power Siting Board and the blessing of the citizens and local government of Union County, Ohio.

I am concerned about the health and safety, both short and long term, of all the citizens, both the land leasers of the proposed project lands and the nearby property owners. This includes not only the health and safety of the citizens, but the health and safety of the environment, the wildlife, the lands, the crops produced on those lands, and the future viability of those lands.

- One of my neighbors found the attached MSDS for a solar panel during an internet search:

https://www1.mscdirect.com/MSDS/MSDS00027/40627119-20150719.PDF?fbclid=IwAR0bMtdiJ30WUIC_8Ypn4QaisEAUNzVTPL3BnQgD7q50eyV5I2viAFCYIOg

Agreed, this is a old MSDS (published 2008) and may not be for the brand of panel that Invenergy is planning to use on Cadence but please note that there are some highly toxic materials present. Of specific concern in this case is cadmium sulfide. (It is my understanding that some solar projects are using older panels that have been warehoused for a significant time so perhaps a panel this old could become part of the Cadence project).

During several of Invenergy's presentations to the concerned citizens of Union County their representatives mentioned that their panels that will be used for Cadence will specifically not contain cadmium, mercury, and lead. They stated this several times. During these presentations I've come to the conclusion that "it's not what they say that I should be concerned about but what they don't say". This makes me wonder what other potentially hazardous components are parts of their panels that weren't mentioned and that the community should be aware of. Thus my request for full disclosure of all MSDSs for the panels that will be used in this project. The participating land owners and adjacent land owners need to be made aware of the potential hazardous components that could be contaminating our soil, groundwater, wells, and air (esp. if there is a fire).

I am requesting that the OPSB require that Invenergy make MSDSs available to the state, to Union County, AND to the concerned citizens of Union County who will be impacted by this project, including leasers and neighboring property owners. The MSDSs should be from each manufacturer of the panels that will be used in the

project and if there are different models of panels from that manufacturer, then MSDSs for each model used. Considering the size of the Cadence solar project I'd expect that Invenergy would be using panels from multiple sources. Basically, I'm looking for Invenergy to be transparent and publish this information for all to see and "for the record". I'd also like to have MSDSs be made easily available for all ancillary equipment, ex. inverters, transformers, etc. that Invenergy plans to use. As old or damaged panels are replaced in the future with newer panels, then MSDSs for those replacement panels should also be made readily available to all to review. And if there are components identified on these MSDSs that are potentially hazardous, then those panels and components shall not be used in the Cadence project or the project shall not be approved.

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• Furthermore, at Invenergy's online meeting held 12/18/20, Invenergy presented that they passed all of EPA's Toxicity Characteristic Leaching Procedure (TCLP) test.

[Cadence Solar will utilize panels that will pass the EPA's Toxicity Characteristic Leaching Procedure \(TCLP\) test.](#)

I have several questions about this testing:

1. Can the actual test procedure be made public to concerned residents and officials of Union County?
2. Will not only the solar panels, but inverters, and other equipment all have been tested?
3. Were only intact panels tested or were broken and/or crushed panels also tested? This is important because in a solar farm of this magnitude (and of any magnitude for that matter), there will be a certain number of panel "failures" during construction and over the estimated lifetime of the solar farm. The crushed panels would probably be a worst case example but everyone should be made aware of results from "worst cases".
4. How is the estimated 30-40 year lifetime accounted for in the test? Is this an "accelerated ageing" lab test? What kind of correlation studies (between lab and real world exposure) have been done? How long was the duration of this test? What were the test conditions?
5. It is extremely important that actual test results be published and not just "Pass/Fail". I'm sure many, if not all of you, understand how EPA Pass/Fail requirements can change frequently. What passes today may not pass tomorrow's regulations, next week's regulations, next month's regulations, next year's regulations, or the regulations ten years from now. It is important that this test data be documented from the start so that it can be compared to all future data and future regulations.
6. I propose that TCLP testing be conducted on a sampling of installed panels annually. I'm concerned that if levels decrease, "Where did "they" go (if results decrease)?" And then should we be looking at soil, water and well testing?

- In Invenergy's March 30, 2021 letter addressed to "Neighbors of Cadence Solar" they state the following re Solar Panel testing:

"Compounds are completely sealed within the glass and coatings of the modules. Furthermore, Cadence Solar will follow safety procedures to ensure that all modules are compliant with the EPA's Toxicity Characteristic Leaching Procedure (TCLP) testing protocol, which categorizes the modules as non-hazardous. By weight, more than **80 percent** of what goes into photovoltaic (PV) modules is glass and aluminum – both common and **easy-to-recycle** materials.

Due to compliance with the TCLP testing protocol, as well as the implementation of a Stormwater Pollution Prevention Plan (SWPPP), which is developed by a qualified engineer pursuant to the requirements of the National Pollutant Discharge Elimination System, construction of the facility will not have impacts to water quality. Mitigation measures will be taken to ensure that impacts to groundwater, surface waters, and wetlands are avoided."

Question:

- o What's the other **20%??**
- o Does Invenergy have specific plans to **recycle** old and/or broken panels? According to the referenced article, recycling of solar panels is in its infancy and not cost effective at the time the article was published. I suggest that no solar project get approved in the state of Ohio until the contracted company (in this case Invenergy) has a specific plan in place to recycle obsolete panels like there are in one other state, Washington. "To date, [Washington is the only state](#) that mandates manufacturers to dispose of panels at a specialized facility". ref Discovery Magazine https://www.discovermagazine.com/environment/solar-panel-waste-the-dark-side-of-clean-energy?fbclid=IwAR1G0hekORw_BvQ3keWoH2nsyc-oB2LgMb0Hr7QjRnfGwTQV471-fG4ZWCc

Thank you for your attention regarding these concerns.

A concerned citizen of Union County, Ohio

W H Ingram

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Case No(s). 20-1677-EL-BGN

Summary: Public Comment of W. H. Ingram, via website. electronically filed by Docketing Staff on behalf of Docketing.