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AUG 11 2025

**PUBLIC SERVICE
COMMISSION**

Kentucky State Board on Electric Generation
211 Sower Boulevard
PO Box 615
Frankfort, KY 40602

Case: Wood Duck 2024-00337

August 4, 2025

Dear Board:

I would like to address fire concerns with the proposed solar project.

First, Wood Duck did not consult with the Glasgow Water Company about this project as stated in the attached letter form the General Manager of the Water Company.

This project covers @4 square miles and 20-30 miles of road frontage. Obviously Wood Duck is not concerned about building 204,525 garage door size panels in residential neighborhoods and putting people, crops and livestock in danger. Fire hydrants, waterlines are insignificant to fight the fires.

I am enclosing a map which was produced by the water company which covers the entire project area and outlines the size of the water lines and the locations of the fire hydrants. After a review by water and fire and a feasibility study, please require Wood Duck to deposit the appropriate amount of funds into an account in KY and make the necessary upgrades as a condition of approval.

Additionally, Barren County failed to follow their own policy when approving this project. As you know, the agricultural properties must be reclassified and zoned as commercial properties, per state law. Barren County Amended Ordinance No 148 states that **Commercial property must have water lines no less than six (6) inches in diameter**. As you can tell by the enclosed map, a large majority of the project area is on four (4) inch water lines. This must be corrected. See attached fire ordinance.

Additionally, from what I have heard, Wood Duck has not met with the fire department or addressed any concerns; although Kelley Pope did send a text message in April 2025 to our fire volunteers to say hello and thank Judge Byrd.

For the violation and noncompliance of our Fire Ordinance, **I ask that no wavier be granted** or mitigation as this project is in residential neighborhoods. It is a danger to people, places and things, things like crops and animals....things that are important to our economics.

Every home, barn, tree, crop, animal, structure is at risk.

Solar Fires: What can cause a solar fire? Lightning, hail damage, rodent damage, a faulty panel which simply leaks, gun fire damage, a tree falling, accumulation of debris, wildlife may jump the fence and damage panels, etc. Panels can simply break and catch on fire. Batteries can catch on fire. Inverters can catch on fire.

The material data sheets for the solar panel Wood Duck identified as using, **Canadian Solar, CS7N-MB-AG has a Class C fire rating** which means it is an electrical fire and must be treated as such. It is a fueled source, hazardous and requires non-conductive extinguishing agents to avoid electrical hazards.

Firefighters must know how to de-energize the solar panels and have non-conductive extinguishers and property personal protection equipment. The key here will be how to extinguish the fire and avoid fire transference to other structures.

- Dangers: Significant increase in heat. When on fire they reach 1,200 degrees Fahrenheit and these are right next to homes, crops and cattle.
- Fire has to be fought on the bottom of the panel
- Toxic chemicals from components – ground and air
- Chemical suppressants or water? Who knows?
- Solar panel farm must burn out – no way to reach panels in middle of a row and multiple rows can catch on fire.
- Fire fighters can only fight fire on the perimeter
- Firefighters need specialized tools to de-energize the systems and personal protection equipment.
- Voltage detectors for CD current insulated tools, Class C Electrical gloves, Arc Flash protective clothing,
- Non conductive helmets with face shields, remote disconnect tools, thermal imaging cameras and gas detectors.
- I request fire suppression systems on neighboring farms and that Wood Duck and successors supply every item requested by the fire departments for the life of the project and until every parcel is completely decommissioned. **We ask the PSC to enforce this request.**

Wood Duck has failed to provide an **inspection schedule** on how often the panels will be inspected to ensure they are in working order. They need to be inspected routinely and immediately anytime the area experiences hail, lightning, tornadoes or torrential rains. They need to be inspected for rodent damage and leakage; as well as the accumulation of debris which can cause fires.

I request that this must be a condition placed on the developer for a timely response for inspection and to remove the shards and soil and replace the soil and damaged panels within 24 hours of discovery. There must be a substantial fine as it is a risk of injury to our community and our assets by the shards of glass. Animals must be humanely released and treated if necessary, should an animal jump over the fence. Michigan State Representative Cam Cavitt has

a video out about glass shards and the impact on the potato industry in his district. Land can never be used for farming again.

Residents and the community need to have someone to call who will respond within 24-hours notice or they should be fined by the county. A leak can be deadly.

Also, Wood Duck has stated they will store abandoned panels on the properties. This is not acceptable as they must be removed immediately because they can leak and catch fire.

Any breakage of the panels and the soil must be removed immediately.

In the event of a fire in a solar compound, the county must develop “shelter in place” notification procedures until the “all clear” can be given.

Recent research on fire in large scale Photovoltaic Applications was published July 29, 2020 by the University of New York and provides insight into fire management and the necessity to avoid HOT SPOTS which can be caused by dust and other failures. It is known there are many farms in Barren County and dust is common, as is mold, pollen, leaves, etc.

A Review for Solar Panel Fire Accident Prevention in Large-Scale PV Applications

ZUYU WU and others, Department of Electronics Engineering, University of York

ABSTRACT Due to the wide applications of solar photovoltaic (PV) technology, safe operation and maintenance of the installed solar panels become more critical as there are potential menaces such as hot spot effects and DC arcs, which may cause fire accidents to the solar panels. In order to minimize the risks of fire accidents in large scale applications of solar panels, this review focuses on the latest techniques for reducing hot spot effects and DC arcs. The risk mitigation solutions mainly focus on two aspects: structure reconfiguration and faulty diagnosis algorithm. The first is to reduce the hot spot effect by adjusting the space between two PV modules in a PV array or relocate some PV modules. The second is to detect the DC arc fault before it causes fire. There are three types of arc detection techniques, including physical analysis, neural network analysis, and wavelet detection analysis. Through these detection methods, the faulty PV cells can be found in a timely manner thereby reducing the risk of PV fire. Based on the review, some precautions to prevent solar panel related fire accidents in large-scale solar PV plants that are located adjacent to residential and commercial areas.

CONCLUSION

The safety of PV power generation and PV arrays is receiving increasing attention, especially the need to reduce the possibility of fire and timely maintenance. The hot spot effect and aging of PV panels were found responsible in previous fire accidents can be caused by the dust density around the PV array, the ambient temperature, (CORN HEAT???) and the material structure of the PV array. Preventive solutions to the fire accident can be distinguished into solar panel reconfiguration and fire fault detection algorithm. The advantages of reconfiguration of PV modules include reducing hot spot and improving power efficiency. Meanwhile, the advantage of the fire fault detection algorithm is to detect faulty position accurately.

In order to reduce the probability of PV fire accident, there are technical specifications to comply. Firstly, the PV module needs to pass the UL 790 “Safety Standard for Roofing Material Fire Test” combustion and flame spread test. Secondly, the inverter should be designed without fuses to avoid fire caused by DC side faults. The inverter internal transformer, PCB board and other internal components prone to high temperature should be made of non-combustible or non-combustible materials. Thirdly, the internal components of the junction box, control equipment, and power distribution equipment should be made of non-combustible materials. Fourthly, all cables are required flame retardant coating and made of low smoke, and low toxicity materials. Fifthly, fireproof sealing measures should be applied to holes, such as cable inlets and outlets of power distribution equipment in houses, equipment inlet holes, cable inlets and outlets of junction boxes, cable penetration holes, cable trenches, and cable trench interfaces.

In addition to research on the mechanism and prevention of PV fires, it is also necessary to consider fire safety issues of PV-building integration. In order to improve the safety of fire prevention and extinguishing of PV systems, it is basal to conduct fire risk investigation and hazard assessment. Test and evaluate the combustion properties and fire resistance of PV modules. Secondly, considering the impact on building safety, it is advised to conduct a comprehensive risk assessment for potential failure units of PV building integration. Design fire separation facilities and use fireproof materials to reduce losses caused by fire accidents. Thirdly, realize the management intelligentization of electrical fire monitoring and early warning, and strengthen the investigation of hidden fire hazards of the equipment. Specifically ,the fire prevention and control system can automatically identify and eliminate fire risks. For example, set up an appropriate automatic fire alarm system, intelligent protection against DC arc, and intelligent blocking components. Finally, it is also critical to strengthen the daily fire supervision and management ,and regularly hold the fire safety training on PV power generation.

Questions which need answers

1. Solar panels can burn for days sending toxins into the area. The panels will be behind locked fences. Who will have access to the fenced area and the ability to shut down the power?
1. Can fire trucks get to them? Some of the panels will be on acreage that is miles off of the main road.
2. What can fire departments do to extinguish the fire?
3. What is the threat of fire transfer when so close to other property lines and structures?
4. What is the anticipated heat of these fires?
5. Will surrounding structures melt?
6. Is it true that a row must burn completely out and that it cannot be extinguished?
7. What is the equipment needed and what is the cost? If approved, will Wood Duck commit to meeting the needs of all departments in Barren County?
8. What training is needed? Will Wood Duck commit to providing this training if the project is approved, paying for the training and the salaries to attend.
9. What is the inspection schedule for Wood Duck to examine the 2,300 acres to ensure the panels are functioning properly? Leaks can damage crops and the waterways. Must check for rodent damage and any breakage.
10. What is the time commitment by which Wood Duck will respond to examine the 2,300 acres in the event of a storm or strong winds? There should be a hefty fine if they fail to meet this time frame.
11. What is the increased heat to the surrounding homes, elderly and crops?
12. What if wildlife gets into inside of the fenced area? Who did they call?
13. Barren County fire departments are volunteer with turnover. What is the plan to ensure that every volunteer is trained in an expeditious manner?
14. What is the training and protocol for the batteries?
15. Will the community need to shelter in place? If so, will Wood Duck commit to paying lost wages and damages? Is there an insurance to protect Barren County?
16. According to the make and model of the solar panels Wood Duck proposed in their decommissioning plan, they are a class c, electrical fire which requires non-conductive extinguishing agents to avoid electrical hazards. What will this cost the citizens of Barren County?
17. Non-Conductive Extinguishers for class c fires such as those containing carbon dioxide or dry chemical are essential when dealing with live electrical equipment. What is the environmental impact on these chemicals to neighboring farms and properties and the underground waterways?
18. Battery fires are a huge concern. As with electric car battery fires, they must burn out. Is that the same for these huge batteries? How long do they burn? What is the environmental impact to the community?
19. How often will the batteries be checked to ensure they are not leaking?

My family and I are opposed to this project for the reasons listed above. This is a complete and utterly failure of Wood Duck to address the basic safety issue of fire protection.

Sincerely,



Connie Williams

440 Patterson Road

Smiths Grove, KY 42171

Attachments

1. Letter from Water company
2. Fire Ordinance
3. Map from Glasgow Water Company
4. Article from BG Daily News



Glasgow Water Company

301 W Main St - P.O. Box 819 - Glasgow, KY 42142-0819
Phone (270) 651-3727 - Fax (270) 651-1651 - www.glasgowh2o.com

March 20, 2025

[REDACTED]
Smiths Grove, KY 42171

Ms. [REDACTED]

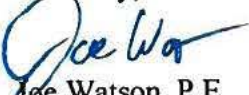
In response to your inquiry, we have attached maps showing the water mains and fire hydrant locations in the area you identified.

It is important to note that while larger diameter pipes support increased water volume and potentially higher pressures, factors like elevation can significantly impact pressure at a particular point. The static water pressure within the project area you specified should range between 50 and 120 psi, depending on location within the area. To provide a more accurate pressure for a specific address, please provide the precise location.

We have also verified that Glasgow Water Company has not received any contact from companies associated with the proposed solar project in that area.

If you need anything else, please do not hesitate to contact us anytime.

Sincerely,


Joe Watson, P.E.
General Manager

BARREN COUNTY, KENTUCKY

AMENDED ORDINANCE NO. 148

AN ORDINANCE ESTABLISHING MINIMUM STANDARDS FOR FIRE PROTECTION IN BARREN COUNTY, KENTUCKY

BE IT HEREBY ORDAINED AS FOLLOWS:

WHEREAS, the cost of residential and commercial fire insurance have greatly increased in recent years; and,

WHEREAS, the residential and commercial development of Barren County has been considerable during the past ten years and is expected to continue into the year 2000 and that those residences and businesses continue to demand quality public safety services; and,

WHEREAS, the requirement to place fire hydrants will facilitate public safety services and fire protection particularly to the residents and businesses of Barren County, and the Barren Fiscal Court deems it to be in the best interest of Barren County to establish minimum standards for fire protection;

NOW THEREFORE, BE IT ORDAINED BY THE COUNTY OF BARREN, KENTUCKY, as follows:

These Regulations shall apply to all new major residential subdivisions, any series of minor residential subdivisions totaling five (5) or more lots, mobile home parks, and commercial buildings within Barren County.

1. Major Residential Subdivisions, any series of minor residential subdivisions totaling five (5) or more lots, and mobile home parks.

FIRE HYDRANTS

The following fire hydrant requirements shall apply to all major residential subdivisions, any series of minor residential subdivision totaling five (5) or more lots, and mobile home parks, fronting on public or private roads in the County of Barren:

A. Fire Hydrant - Installation

Fire hydrants shall be spaced not farther than 1000 feet apart as measured over public and private roads. Fire hydrants shall be connected to a new six inch or larger main or an existing four inch or larger main.

B. Fire Hydrant - Type

the shortest feasible exterior route (never measured through buildings) for laying hose.

3. Fire hydrants must be located at least 25 feet from the exterior wall of any masonry building, and at least 50 feet from any exterior wall of frame or equivalent construction, including brick and stone veneer.

C. Fire Hydrant Type

1. Fire hydrants shall meet the minimum specifications and be installed in conformity with the requirements of the local water authorities.
2. Fire hydrants shall be equipped with not less than two 2-1/2 inch outlets and a 4-1/2 inch pumper outlet.
3. A gate valve must be installed in the hydrant connection to the road main.
4. The color of the hydrant shall be consistent with National Code.

3. City-County Planning Commission Responsibilities

The City-County Planning Commission shall require new major subdivisions, any series of minor residential subdivisions totaling five (5) or more lots, mobile home parks, and commercial subdivisions and developments in the County of Barren to comply with the fire hydrant and water supply requirements set out above.

4. Enforcement and Penalty

- a. Before final approval of a plat or issuance of an occupancy permit, the developer/builder must post a cash bond of \$2,000.00 per fire hydrant to be installed as specified in the above Ordinance. If hydrants are not installed within sixty (60) days of final approval of plats, forfeiture of bonds will take place or occupancy permit shall be denied in addition to forfeiture of bond.
- b. Fire hydrants shall not be blocked by vegetation. Fire hydrants shall not be blocked at any time by vehicles, fences, buildings, or other enhancements to property. In no case shall any of the aforementioned items be closer than ten feet (10) to a hydrant, excepting livestock holding fences which may exist no closer than two feet (2) to a hydrant. However, no fence shall be built between a hydrant and the highway serving that hydrant.
- c. Enforcement of 4b above shall be the responsibility of the Fire Chief of the responsible community fire department. The fine for non-compliance shall be set at \$100.00 for first occurrence; then \$500.00 for each subsequent occurrence, payable to the general fund of Barren County.

1. Fire hydrants shall meet with minimum specifications and be installed in conformity with the requirements of the serving utility and ISO standard.
 2. Fire hydrants shall be equipped with not less than two 2-1/2 inch outlets and a 4-1/2 inch pumper outlet with National Standard threads.
 3. A gate valve shall be installed in the hydrant connection to the road main.
 4. All water mains shall include fire hydrant branch connections.
2. Commercial Buildings and Development, Industrial Buildings and Development, and Multi-Family Residential Development.

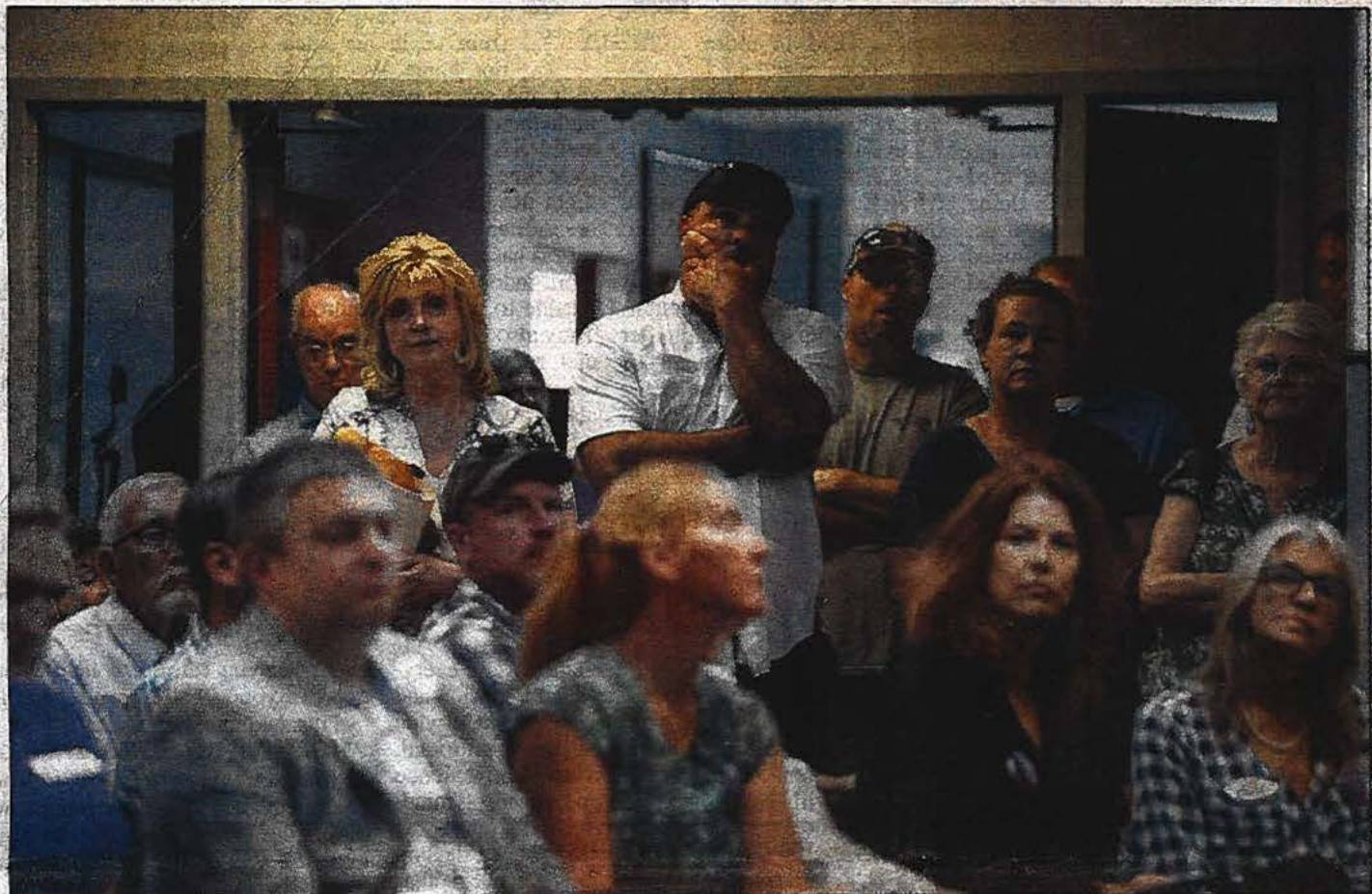
A. Water Supply

1. Water mains shall be no less than six (6) inches in diameter, including fire hydrant branch connections, installed in conformity with the minimum requirements of the local water authorities.
2. Written approval of the Fire Chief of the responsible community fire department shall be obtained prior to the approval of a plat or prior to the issuance of a building permit.
3. Water mains shall be so arranged that the distance between intersecting mains does not exceed 1500 feet. If intersecting mains are at a distance in excess of 1500 feet, eight-inch or larger mains must be used.
4. Eight-inch mains shall be used where dead end and poor circulating gridironing is likely to exist for a considerable period of time, or where the layout of the streets and topographical characteristics are not well adapted to a circulating system.
5. The distribution system shall be equipped with a sufficient number of valves so located that breakage or other interruption will not cause the shut down of any portion of a main greater than 1500 feet. Wherever meters are installed in conjunction with fire hydrants, said meters shall be of the fire protection type and at least six inches in size.

B. Fire Hydrant Installation

1. Fire hydrant spacing shall not be less than that required for residential areas referred to above, and in addition, each building shall have hydrants within the following distances:
 - a. 500 feet distance – 1 hydrant
 - b. 1000 feet distance – 2 hydrants
 - c. 1500 feet distance – 3 hydrant
2. No part of the exterior of the buildings, other than dwellings, shall be further than 500 feet from a hydrant. Distances are to be measured along

SOLAR SQUABBLE



PHOTOS BY GRACE MCDOWELL / Daily News
Visitors file into the Barren County Fiscal Court meeting room in Glasgow on Tuesday for a public hearing on the controversial Wood Duck Solar, LLC, solar energy project.

Barren County solar farm proposal mostly criticized at public hearing

DAVID MAMARIL HOROWITZ
david.horowitz@bgdailynews.com

GLASGOW — More than 60 people squeezed into a room and trailed out the door in a Tuesday public hearing for a controversial solar-electric project that would span 2,259 acres across Barren County.

The utility-scale, 100-megawatt project, called Wood Duck Solar, is proposed for 8230 New Bowling Green Road and led by the Charlotte, North Carolina-based company Geenex. At least 17 people delivered oral public comments at the hearing, the vast majority opposing the project.

The seven-member Kentucky State Board of Electric Generation and Transmission Siting Board — whose approval is required for the project, given its generating capacity — includes the three

Public Service Commission Executive Director Linda Bridwell speaks about the project application process at Tuesday's hearing.

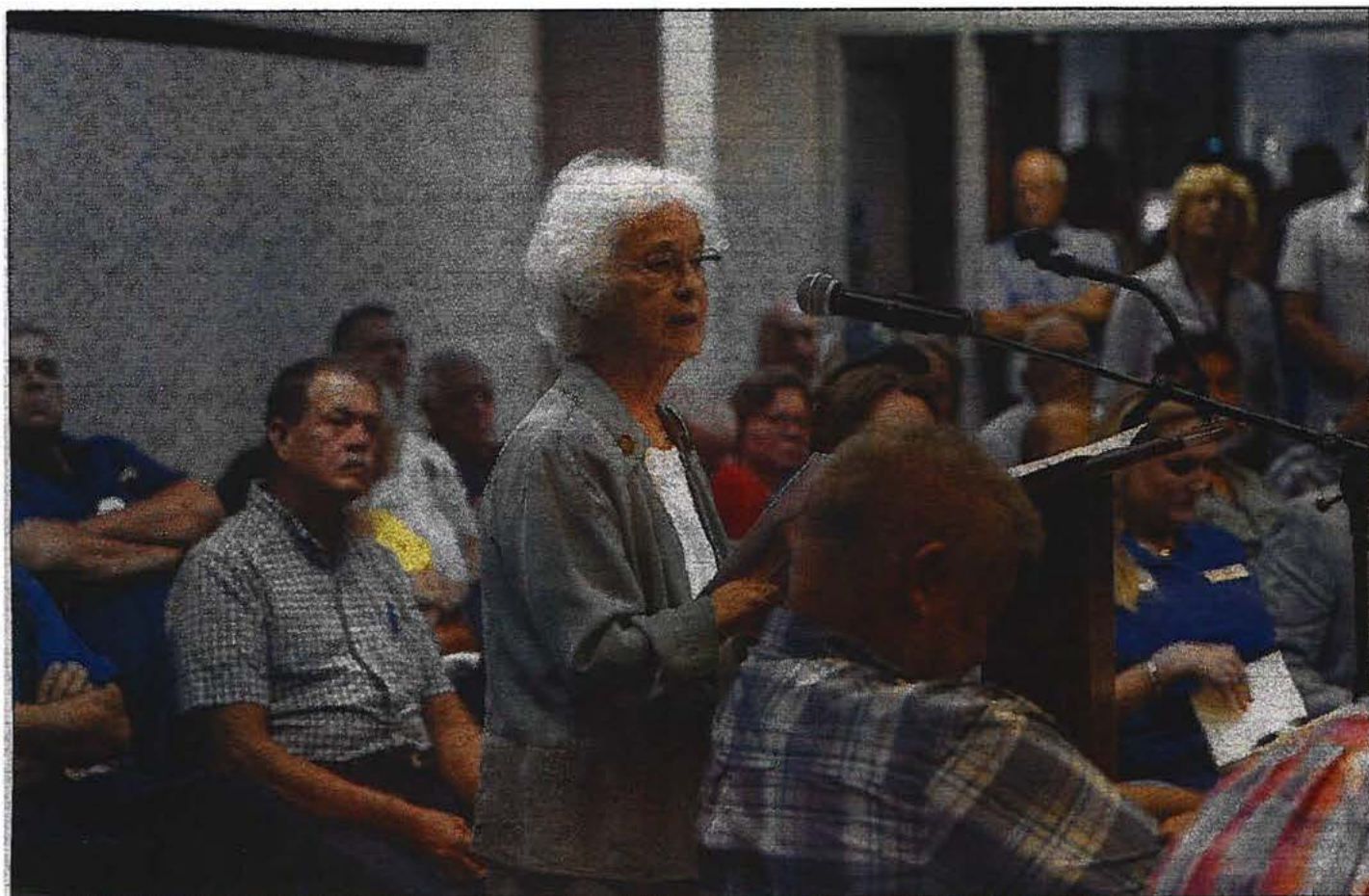
commissioners who are on the state Public Service Commission.

Since Barren County has essentially no applicable zoning regulations, local government cannot stop the project. Tuesday's hearing was intended to inform the state PSC commissioners with local public input; several Barren County Fiscal Court commissioners and Barren County Judge-Executive Jamie Bewley Byrd also showed up to hear comments.

A formal project hearing is set for 9 a.m. ET Oct. 2 at the PSC in Frankfort, and a decision is required by Nov. 14.

See **SOLAR, 3A**





GRACE MCDOWELL / Daily News

Margie Dawsey reads a letter signed by members of the Amish community in Park City voicing their opposition to the controversial Wood Duck Solar, LLC, solar energy project.

From Page 1A SOLAR

Geenex expects the 100-megawatt project to generate electricity that'd serve about 15,000 homes' electric needs annually. It aims to create sustainable energy while boosting the economy by numerous millions of dollars across Barren County and the state, according to Geenex.

Concerns among project opponents — among them, Mammoth Cave advocates, area property owners, farmers and Amish community members — included property value reductions, a removal of farmland, potential project toxins, a threat to local wildlife that feeds families, ramifications if storms destroy the panels, project decommissioning details, glare issues, road problems and an alleged lack of transparency.

Raula Pedigo, who's staunchly opposed the project, brought a stack of 52 letters asking the county judge to publicly oppose the project. She told the Daily News that community members have lacked the opportunity to ask questions or submit input before the project was approved by Planning and Zoning.

"That's part of why you're seeing such a tremendous outpouring in response to the project," she told the Daily News. "Folks are outraged."

Michelle Snyder expressed concern that the panels would catch on fire, pointing to fires at a solar project in Eagle Point, Oregon. A solar farm there had two grass fires in two months last year, both caused by overheated electronic panels, the area's Fire District 3 reportedly stated in a release.

Should panels in the proposed Wood Duck project catch fire, Snyder said, it would cause dripping directly into the Mammoth Cave watershed and poison it. She refer-

enced an April 15 letter from Mammoth Cave National Park Superintendent Barclay Trimble to the Kentucky Public Service Commission outlining park concerns.

Park representatives previously told the Daily News that because the panels are proposed for the park's drainage basin, leaked chemicals may pollute groundwater and harm 160 species of animals relying on the cave system.

Margie Dawsey, reading from a statement signed by members of the Old Order Amish congregation of Park City, said the panels would completely surround their home, and they worry about chemicals.

"We are concerned with the health of our children and of ourselves ...," she said.

She added that if chain-link fences surround their farm, it would prevent family members from sustaining themselves during deer season in November — "taking good, healthy God-given food out of the mouths of our children."

She also described the blessings of living in their natural environment, stating that the project would mean "a way of life will be forever gone."

Tiffany Thompson, who owns a swathe of land adjacent to the property, spoke in opposition, particularly concerning what she and others have described as a scattered-site project model. This, she said, "affects a vastly greater number of adjacent farmers and landowners than other projects, as well as the community impacts."

I would implore the PSC to consider this in their decision-making on this particular solar energy project, and deny this company the access they want that will destroy our valuable farmland for generation after generation to come, if this land is ever able to be farmed again."

Project supporters highlighted the jobs the project would create and the energy and taxes it would bring to the region.

Lonnie Calvert, from Louisville, said he spoke on behalf of Laborers International Union of North America Local 1392, out of Owensboro as he expressed support for the project.

Most of all, he spotlighted jobs: Temporary work is the nature of construction, he said, as people constantly work on one job site and then move to the next.

"These folks will take these skills that they learn on this project, and they're transferable skills where they can stay in this community and work on other union projects out of this local union's jurisdiction and turn around and have a permanent career path, not just a temporary job," he said.

Darrell Burks, born and raised in Barren County, said he saw the county decades ago undergo a period without prosperity, and has since seen it prosper and grow.

When a business considers coming to a county, it considers what utility resources are afforded, he said, adding that if a county cannot provide those resources, a business "will walk out of the first meeting."

He expressed concern that the community shouldn't depend solely on limited supplies of gas and coal.

"We've got to use alternative sources," he said. "We've got the one best source that God has ever created, and that's our universe. We have the sun. Doesn't cost you or I one penny. By being able to harvest the sun, we can convert that energy into a usable source that I daresay every one of us in this meeting uses."

Oral public comments for the Oct. 2 formal hearing can be offered prior to the start of the hearing, with instructions to be available on the PSC website. Public comments can also be made in writing, with the case number 2024-00337 in the email subject line and sent to psc.comment@ky.gov with a person's full name and address of residence in the body of the email.

