

**RICHMOND COUNTY PLANNING COMMISSION  
MEETING MINUTES**

February 10, 2020

The Richmond County Planning Commission held its regularly scheduled meeting on Monday, February 10, 2020, in the Public Meeting Room, County Administrative Building, Warsaw, VA.

The following members were present:

Rick Cox  
Glenn Bowen  
Harry Smith, Jr.  
Brian Mothershead  
Cassandra Jackson  
John W. Lewis  
Marion James Packett  
Darnell Clayton  
J.R. Fidler  
Brian Jackson

Also present:

R. Morgan Quicke, County Administrator  
Hope Mothershead, Director of Planning and Zoning  
Liz Hylan, Administrative Assistant  
Louis Iannone, Strata Solar, Zoning Manager  
Brent Neimann, PE, Strata Solar, Director of Civil Engineering  
Katy Hill, Strata Solar, Vegetation Manager  
Tommy Cleveland, PE, Strata Solar  
Approximately 35 others.

**CALL TO ORDER, INVOCATION, AND PLEDGE OF ALLEGIANCE**

Glenn Bowen called the meeting to order at 7:00 p.m. Mr. Bowen gave the invocation and Mr. Lewis led everyone in the Pledge of Allegiance.

**PUBLIC COMMENT**

Mr. Booker on Cedar Grove Road, noted his farm adjoins the beginning of the proposed solar farm. Mr. Booker stated the solar farm is taking the name of Bookers Mill. Mr. Booker reviewed an article from Forbes magazine that reads if solar panels are so clean why do they produce so much toxic waste. Mr. Booker noted 1600 acres with 800 acres of solar panels is unbelievable. Mr. Booker also noted the trees will be cut, the roots will be ground up, the ground will be worked up to get rid of the roots to plant green grass between the panels, and feels there's no way there not going to have runoff. Mr. Booker mentioned not in any backyard should 1600 acres of land be taken. Mr. Booker stated he is opposed to the solar farm.

Will Booker noted he is concerned with the short term and long-term affect this will have on the environment. Mr. Booker mentioned he has looked Strata up and they seem to have a fairly strong company with a good safety track record. Mr. Booker asked are we willing to gamble on the heritage and the property to have a 1600-acre farm with potential runoff. Mr. Booker noted he is concerned with the heritage of the Northern Neck and how it will be affected if a project this size is accepted. Mr. Booker stated he is opposed.

Carol Lowery mentioned we are surrounded by water and all the stream beds she can't see how the County would approve and have the impact of the runoff. Ms. Lowery also mentioned we will have mud once the land starts getting cleared off. Ms. Lowery noted she is impacted by this solar farm and it will be all around her. Ms. Lowery stated her land and lifestyle will be changed around for a boat load of money. Ms. Lowery noted if this project is approved it will be more harm than good. Ms. Lowery stated she opposes this project.

Keith Lowery stated he is opposed to this project. Mr. Lowery noted he is disappointed in the County's transparency about this project. Mr. Lowery mentioned the County has known about this since April of last year and noted nobody has come forward and said anything until a letter was received by Strata Solar. Mr. Lowery mentioned why would a solar company want to come in and take so much land from this little beautiful County that we have and ruin it. Mr. Lowery also mentioned he agrees with his mom it is all about the money. Mr. Lowery noted he spoke with a solar expert in Lancaster County who has looked at the plans and asked why would the County ever let this come.

James Holbrook of Cedar Grove Road, asked about potential fire hazards and who will be responsible to train the local fire department on how to handle any fires at this type of facility. Mr. Holbrook also asked what preparation has been considered to address a possible fire at this type of facility. Mr. Holbrook noted if water is used is there adequate equipment and resources for this or can this put any strain on the County's water resources. Mr. Holbrook mentioned if special equipment is needed on the current equipment who is responsible for that added expense. Mr. Holbrook noted night time emergency lighting can also be dangerous. Mr. Holbrook expressed his concern on all the equipment use and hopes that all is made in the USA. Mr. Holbrook mentioned he hopes everyone looks at the image of the Northern Neck and take meaning when making a decision on solar city.

Debbie Holbrook expressed her concern on the future land the zinc in the pipes that will be pounded in the ground gets into their water supply as well as the Teflon that coats the panels and the products that are inside of the panels. Mrs. Holbrook noted if a hurricane comes through, they won't be protected by the trees because the ones left will be taken down. Mrs. Holbrook also noted if a major catastrophe occurs she hopes bonding will help. Mrs. Holbrook stated the property owners feel overwhelmed and understands that Sands Anderson is the Attorney and asked is Sands Anderson made available for those as individuals so they can talk about their personal concerns and feel protected. Chairman Bowen commented he understands that Sands Anderson only represents the County. Mrs. Holbrook asked is there a possibility for those few to talk to Sands Anderson.

Alice Thomas mentioned she can't fathom taking the land that's so rich in history and changing the landscape and taking away the beauty of the Northern Neck. Mrs. Thomas asked if her property or any residence property is damaged in anyway including but not limited to well water contamination who will be responsible and what safe guards will be put in place. Mrs. Thomas noted one major aspect that is concerning is her house sits up on a hill and the solar panels will be directly in front of her home. Mrs. Thomas also noted the sunlight goes from one side of the house to the other so the solar panels will be facing her house the entire day and does not feel like that is safe. Mrs. Thomas mentioned what part will the County take on ongoing inspections of the facility to ensure water quality, screening, maintenance, and ground quality and what bonds will be in place to address each of these issues should a natural disaster strike. Mrs. Thomas asked what the County and Solar company will do to help safeguard their lives.

Richard Moncure noted he works for Friends of the Rappahannock and lives with his family on Lancaster Creek that is one of the sub water sheds of the Rappahannock River impacted by this proposal. Mr. Moncure mentioned there is a Comprehensive Plan in Richmond County that has been worked on really hard to keep Lancaster Creek clean and productive as well as the Soil and Water Conservation District that has worked really hard for the farmers. Mr. Moncure read the following statement:

*Richmond County - "It's a place where the morning coffee comes with a view of eagles and osprey and where tonight's seafood special is whatever takes your bait. It's a place where history lives in the bricks and mortar and where traditions are more important than trends. It's a place where rush hour is a hay baler crossing the highway, where passing motorists smile and wave, a place where you're always welcome. It's Richmond County. For the weekend or forever."*

Mr. Moncure mentioned friends of the Rappahannock recognizes the importance of renewable energy and are very supportive of wind and solar, but just like any development there's a right and a wrong place when it comes to sensitive areas and resources like streams, wetlands, wildlife, habitat and cultural resources. Mr. Moncure noted additionally there needs to be erosion and sediment controls and storm water management to prevent damages to the water resources. Mr. Moncure mentioned he hopes that the Commissioners will work with the citizens to slow this project down or even possibly deny it.

Jean Hinson Light noted she lives on the Hook Road but grew up on Cedar Grove Road. Mrs. Light also noted she would like to find out a lot more information. Mrs. Light asked has an environmental impact study been presented by a University and not an interested party to the Strata Solar farm group. Mrs. Light mentioned within that environmental study there should be a mitigation clause or measure. Mrs. Light also mentioned how are they going to give back what's been taken away such as all the woodland, the lively hood of all the animals, the birds, the squirrels, and rabbits. Mrs. Light asked why take prime woodland when there is other land available. Mrs. Light noted there is a natural spring that runs and connects to the Booker Mill pond and it doesn't get any more Northern Neck or Richmond County than that. Mrs. Light also noted it is very important to protect the waterways and who is going to control 1600 acres of sediment protection. Mrs. Light asked who will benefit from this at the end of the day.

Hyte Smith mentioned she shares concerns that were already expressed. Ms. Smith noted she understands there is bonding involved for various hazards and end of equipment commissioning and is concerned if the amount of bonding is sufficient for a full chemical cleanup, a complete cleanup after 30-40 years of service of just the residue materials, or the cleanup of the decommission from the panels. Ms. Smith asked if there isn't enough funding in the bonding is the County going to be left with the expense of clean up, repair or removable. Ms. Smith stated she is a citizen of Richmond County and this issue affects everybody. Ms. Smith noted these questions need to be answered for the benefit of the entire County.

Jay Buiett stated everyone knows what the placement of this solar farm will do to property values. Mr. Buiett mentioned if this project goes forward he feels Richmond County should fund an escrow account to pay for the reduced values of homes. Mr. Buiett noted Richmond County has the old Warsaw Town dump, the Tri County landfill and the Warsaw bypass simply sitting there with the correct zoning. Mr. Buiett mentioned the runoff that affected Essex County is sure to happen here. Mr. Buiett noted the runoff and silting will kill the beds. Mr. Buiett mentioned why not place the solar site in an un inhabited area the proposed site slopes into Totuskey, Lancaster and Deep Creek water sheds. Mr. Buiett stated please vote no and protect our County.

**APPROVAL OF MINUTES – JANUARY 6<sup>TH</sup>, 2020 MEETING**

Glenn Bowen asked if there were any additions or corrections to the minutes from the January 6<sup>th</sup>, 2020 meeting. J.R. Fidler made a motion to approve the minutes. Darnell Clayton seconded the motion and they were approved unanimously.

**SOLAR PROJECT PRESENTATION- STRATA SOLAR**

Mr. Quicke reviewed a brief presentation of the Strata Solar “Bookers Mill’ application to help benefit those that are new to the commission, old to the commission and the audience. *(See Exhibit I)*

Mr. Quicke stated the County Attorney is for questions of County staff and committee members. Mr. Quicke noted any concerns that the adjacent property owners or the public has the County will be glad and intend to get answers. Mr. Quicke mentioned all the questions that are being asked are very important to this process. Mr. Quicke noted the reason the County Attorney is for the County and for the benefit of the County is it is very costly and because everything should track through the County.

Mr. Quicke noted anyone who would like an attorney for this venture they would need to hire their own attorney.

Mr. Iannone mentioned some issues that were raised last month were visibility, maintaining rural character and what fits in a rural setting, curbside use, substantial core with the Comprehensive Plan, hazardous materials, decommissioning, property values and economic impact.

Mr. Iannone stated all of this is in response to the citizens. Mr. Iannone noted this is the fifth meeting and are concerned and care about what the citizens say.

Mr. Neimann noted Strata did a drive thru of the property to identify the existing vegetation areas that were maybe lacking. Mr. Neimann mentioned there is some vegetation that is establishing naturally and the natural buffer is better than anything that is artificially planted for long term success and visibility screening. Mr. Neimann mentioned the length of time between now and when construction begins there will be another couple years of growth. Mr. Neimann noted they have provided a subliminal planting buffer that’s three staggered rows of materials and that is a 50-foot planted buffer. Mr. Neimann also noted on the site plan where there is a residence that has view of the project will see 100 ft preserved areas of existing vegetation and generally the way that’s handled is depending when construction starts what the growth is at the time for staff to review those areas on the ground and determine whether there adequate or supplement and that’s why there’s a buffer. Mr. Neimann mentioned if those buffers and setbacks are inadequate Strata would plant to the planning that is provided. Mr. Neimann noted they would have an area that’s native growth and grasses and pollinators that will be around the array. Mr. Neimann mentioned also provided is a minimum of 100 ft. setback to equipment’s from all public right of ways.

Mr. Neimann clarified the difference between a setback and a buffer. Mr. Neimann noted a buffer would be like a screening whereas a setback would be a physical setback from an actual structure.

Mr. Neimann mentioned Strata is very familiar with the standards and requirements of DEQ and the County. Mr. Neimann noted the County has the authority for the erosion control and land disturbance permitting which is temporary during construction and DEQ holds the authority to issue the permanent stormwater permit.

Mr. Neimann noted their strategy is to install permanent basins. Mr. Neimann also noted the basins that are installed are operated one way during construction to lower stormwater events and then converted to a

permanent structure. Mr. Neimann mentioned as for the post construction there's a requirement from DEQ that post construction has to be equal to or less than pre construction runoff volumes from all exit points on the site. Mr. Neimann stated a site like this would approximately have about 25 points to study.

Mr. Neimann mentioned the preliminary estimates on this site are somewhere between 180 to 200 permanent stormwater facilities to control that stormwater runoff.

Mr. Neimann noted any area that's disturbed ground to grub has to be protected on the perimeter. Mr. Neimann mentioned you can't disturb any part of the drainage area to the facility until it's in place and signed off by the County inspectors. Mr. Neimann noted there likely will be an inspection for a targeted area every other day.

Mr. Packett asked if the retention is created prior to any disturbance so once the ground is disturbed if there is precipitation and runoff it will have somewhere to go. Mr. Neimann noted Strata has a preliminary plan so early on in the process they are working off of County topo or US geo quad map topo and survey topo to site those facilities.

Mr. Neimann mentioned there will be conversations with the inspectors so they understand where contractors will be working and intend on opening up land so that no materials or trees are cut other than to install those measures as well as no grubbing is to take place until those areas are signed off.

Mr. Smith asked if Strata has control over the property owners if they want to harvest their own timber. Mr. Neimann noted Strata will not take credit for the property owners' timber and anything that is shown on the plan is within the boundaries of the project that Strata has control over and able to preserve.

Mr. Smith asked if the wire going to the solar panels will be trenched, backhoed or plowed. Mr. Neimann mentioned this is a tracker system so it will follow the sun. Mr. Neimann noted generally they prefer flat open land. Mr. Neimann also noted they can accommodate up to 15% to 20% slopes depending on the racking and post height adjustment. Mr. Neimann mentioned there's strategies to where you don't have to have a level site to install the facility. Mr. Neimann noted in no way would they try and level this site the time and cost would make the project infeasible. Mr. Neimann mentioned on the racking itself is what you call the source bar holds the strings of the panels together that are on the back of the panels strung together. Mr. Neimann noted generally they utilize an above ground cable management system across the East West direction with the racking, those strings are then congregated into a combiner box and that combiner box has an output circuit that is buried underground to intruder skits that's then transferred to voltage.

Mr. Smith asked how deep all of the trenching wire would be. Mr. Neimann noted DC wiring is 24 inches and AC voltage wiring is 36-48 inches.

Mr. Iannone noted a lot of the questions and concerns heard come down to existing law and existing regulations. Mr. Iannone mentioned whether its hazardous materials or erosion it's the law and there are regulations that have to be followed.

Ms. Hill mentioned Strata acknowledges the most effective visual screen to provide is the preservation of exiting vegetation. Ms. Hill noted the majority of the site plan does identify those 50 and 100ft. preserve vegetation buffer areas. Ms. Hill mentioned they've seen multiple benefits to preservation which is the continuity of the surrounding natural landscape leaving mature vegetation maintains the visual aesthetics of the surrounding woodlands. Ms. Hill noted the intent is to perceive as a continuation of the native landscape.

Ms. Hill noted the native landscape creates a depth and layering of plant material that immediately lends capacity to the buffer spaces. Ms. Hill also noted Strata sees the preservation of existing vegetation as providing an instantaneous screening.

Ms. Hill noted in areas where the existing vegetation isn't sufficient enough to stay in harmony with the surrounding landscaping for supplementation is required a replanting strategy is being proposed with similar species and densities to the neighboring pine plantations.

Ms. Hill reviewed photos taken on site of the existing buffer. **(See Exhibit II)**

Ms. Hill mentioned Strata has reached out and consulted with John Reed who is the local forester and managing the plots. Ms. Hill noted they confirmed with Mr. Reed about whether the area was planted and if so when and what density. Ms. Hill mentioned Mr. Reed noted there was nothing particularly special about those plantings that the area was hand planted with the density of about one plant every ten square feet into existing vegetation and the two plots along 601 were at five or six years of growth. Ms. Hill also mentioned Mr. Reed described the growth pattern of loblolly pines is very predictable and very reliable but the growth is indexed on a site index chart for this site and it assumed 63 to 65 feet of growth over a 25-year period.

Ms. Hill noted being able to contract with a local forester who is confident and reliably return on a no time line is a valuable proposition.

Ms. Hill mentioned in addition to the loblolly pines reforestation they would be proposing planting those remaining spaces of landscape buffer with a native grass and wild flower mix. Ms. Hill also mentioned they have had a lot of success planting native plants in the past.

Ms. Hill noted the native grass is adapted to local soil and water patterns and even local pest. Ms. Hill mentioned once established they require less irrigation, less fertilization and less pesticide. Ms. Hill noted native grass also have deeper more complex root systems and can help aide in rain water implementation and pollutant removal and also be providing pollinator and wildlife habitat. Ms. Hill mentioned this habitat in turn can support pollination on neighboring agricultural land.

Ms. Hill stated the intent for the landscape buffer is to provide a quick growing native buffer that blends with the surrounding land.

Ms. Hill noted there would be no use of herbicides during construction or in the buffer areas.

Ms. Hill mentioned where herbicide use may be encountered is during operations and maintenance of the facility. Ms. Hill also mentioned the majority of vegetation that occurs on these farms is mechanical mowing with zero turn mowers, a tractor with a bush hog, a walk behind mower, tree trimmers or a weed eater.

Ms. Hill noted the herbicide is only used after a particular pest or nuisance vegetation has been identified. Ms. Hill mentioned an herbicide plan will be submitted to the facility owner who then would approve the plan of treatment. Ms. Hill stated they are required by the State of Virginia to operate under a pesticide business license and all applicators have to be licensed commercial herbicide applicators or registered technicians.

Mr. Cox asked for the pines planted will they be using genetic modified seedings that are used for rapid growth. Ms. Hill noted the species has not been identified at this time. Ms. Hill also noted in other plans reforestation recommendations have been to get the plants from the VA Department of Forestry. Mr. Cox mentioned you would get a much faster response if seedlings of the genetically modified were used.

Mr. Packett asked for an example of when herbicide will need to be used at this site. Ms. Hill noted there would be a few agriculture weeds that could become persistent generally in smaller areas.

Mr. Smith asked how often would the site be mowed. Ms. Hill noted generally the area will get mowed approximately once a month with a mowing staff of 10-12 permanent employees.

Mr. Iannone stated he feels a solar farm would be a lot less intense than other permitted uses by right.

Mr. Iannone noted if this project is approved you will find it is substantially in accord with the Comprehensive Plan. Mr. Iannone mentioned a solar ordinance was adopted by the Board of Supervisors for A-1, which is a big step to the direction of the compliance with the Comprehensive Plan.

Mr. Cox asked if Strata does ground water monitoring or put monitoring wells around the site. Mr. Iannone noted not to his knowledge. Mr. Cox suggested having some background monitoring done of those water supplies prior to installation.

Mr. Iannone mentioned some other issues are the Virginia Senate Bill 966 and Virginia Energy Plan both of which found that 5,000 MW of utility owned and utility operated wind and solar resources deemed in the public interest.

Mr. Iannone noted there are existing regulations with the hazardous materials such as EPA, VA DEQ and Chesapeake Bay regulations and any discharge would be in violation with those existing regulations.

Mr. Iannone mentioned every solar farm requires all environmental permits.

Mr. Iannone noted Dominion, Corporate Power Purchasers, Investors and Banks are all entities that are involved and big investors. Mr. Iannone mentioned none of these parties want to be involved with any environmental problems.

Mr. Tommy Cleveland mentioned there are very small amounts of potentially hazardous materials.

Mr. Cleveland noted the solar panels are physically and chemically sealed and have no impacts to the public health and safety.

Mr. Cleveland mentioned when these panels are producing energy there producing natural gas and maybe a coal plant is burning less fuels.

Mr. Cleveland noted toxicity was an expressed concern and all the panels are made of glass with an aluminum frame that makes them durable. Mr. Cleveland mentioned inside the glass and aluminum is a piece of silicone that makes the electricity, then small amounts of metal that conducts the way the electricity and then layers of clear plastics that keeps moisture away from those internal working parts. Mr. Cleveland stated none of those items listed are potentially toxic but the one part that is a little bit of lead-based solder. Mr. Cleveland noted if the glass is broken it breaks into little pieces of glass that stays together and can be removed.

Mr. Cleveland mentioned there's an EPA test that determines if something is hazardous waste. Mr. Cleveland noted the modern panels have been passing those tests and considered non-hazardous waste.

Mr. Cox asked if all panels have to meet a standard test. Mr. Cleveland stated there's an international standard and a UL required that is a safety base standard that includes basic physical strength requirements. Mr. Cox also asked if there a standard for toxic waste.

Mr. Cleveland noted if the panels don't meet the standard, they could not go into a regular landfill they would have to go into a special hazardous waste landfill.

Mr. Cleveland mentioned there are two different technologies on the market for solar panels one is a silicone-based panel which is what the Booker's Mill project is proposing to use and the other type of panel that uses no silicone and instead uses a compound.

Chairman Bowen asked if there will be any Teflon on these panels. Mr. Cleveland noted there is none he knows of and there has been a concern of cadmium telluride but there will be no cadmium panels used with this project. Mr. Cleveland also noted there isn't zinc in the panels but a lot of the structures have the zinc coding to protect the steel from corroding.

Mr. Cleveland noted another concern potentially is electromagnetic fields. Mr. Cleveland mentioned nobody will experience any additional EMF from this project.

Mr. Cleveland mentioned if a fire does start it will burn itself out and is generally not a concern other than the owner to replace any damaged equipment. Mr. Cleveland noted electric shock is another risk but mainly to someone inside the facility working and that is a marginal risk if they know what they are doing.

Mr. Smith asked how many panels it will take to replace a tree. Mr. Cleveland noted it depends on what happens to that wood when it is harvested.

Mr. Iannone briefly reviewed an article with information about GenX that is a PFAS compound commonly found in household products including food packaging, non-stain carpets, non-stain clothing and a lot of industries use it. Mr. Iannone noted there is a big problem and it is not from solar panels it is from industries putting it straight into the water.

Mr. Cox stated it was told there is no Teflon in the packing. Mr. Cleveland noted he has seen nothing suggesting it is in there. Mr. Cleveland also noted it is in many products and does not believe it is in there and if it was it would be a minimal amount and not certain if it is.

Mr. Iannone stated he has yet to find any evidence that Teflon is getting into the environment from a solar panel.

The Commissioners asked to find out if the solar panels are manufactured with Teflon. Mr. Fidler mentioned Teflon is an issue and has been tested and found in drinking water everywhere.

Chairman Bowen asked if the study of panels just consists of research or does an actual study of the panels take place. Mr. Cleveland noted it consists of studying the academic research of others that have tested the panels.

Chris Kaila noted he is not an employee of any solar company and is an independent Real Estate appraiser. Mr. Kaila mentioned he has researched and interviewed other appraisers including the Department of Energy and will conclude that solar farms do not negatively affect property values.

Mr. Kaila mentioned expert Patricia McGrafton noted solar power is the kind of industry you would want because it is clean and what affects property values is good schools around localities that have clean power where they don't have to put up a lot of services.

Mrs. Holbrook asked Mr. Kaila if he would buy a house right across the street from a solar farm. Mrs. Holbrook stated the first thing a realtor tells you is that you have to disclose there's a power plant going next door and local realtors are afraid to say anything and tell you they would not buy it. Mr. Kaila noted it is bad news when realtors are putting up negative vibes when the solar farm isn't there. Mr. Kaila also noted it is all about what the price is and what it sells for.

Mrs. Holbrook stated her home is only valuable to people like herself who want to be out in those uncut woods and to take that away it is not worth anything because they won't have anything.

Mr. Buiett noted he has spoken to realtors and they have stated they would not list a house this close to a solar farm.

Mr. Kaila mentioned the sales that took place by the solar farm were compared to ones not sold by the solar farms and they were virtually the same with no degradation.

Fletcher Mangum noted he was commissioned by Strata to do an economic impact assessment for the Bookers Mill Solar facility. Mr. Mangum mentioned that economic impact assessment that contained two parts the first part was the economic impact assessment and the second part is the physical impact assessment.

Mr. Mangum mentioned for the economic impact assessment part of the physical assessment uses a software model called in plan. Mr. Mangum noted in plan is commonly used economic simulation models in the Country and Virginia. Mr. Mangum mentioned in plan is so popular because it uses data that is industry specific and geographically specific. Mr. Mangum stated when they took the data that was provided by Strata and ran it with the construction phase of the project \$63.4 million dollars of the overall investment was in construction and 57% of those dollars will stay within the region. Mr. Mangum noted the overall impact of the assessment was 397 full time equivalent jobs, \$16.3 million in labor income and \$46.9 million dollars in overall economic output. Mr. Mangum stated the overall annual operating impact is 12 permanent operation jobs and \$446,000 annual in wages and \$1.4 million economic output.

Mr. Mangum noted the physical impact assessment was done in two parts first the construction estimates and the in-plan model was used for that as well. Mr. Mangum mentioned they found the overall state and local economic physical impact for the construction phase of the project will be \$1.4 million.

Mr. Lewis mentioned in last month's meeting someone mentioned there would be no burning being done but in the book it states stump removal and grubbing will generate natural wood debris to be burned on site. Mr. Naftel noted the extent it says in the book is incorrect, it will be mulching and the book will be corrected.

Mr. Lewis mentioned from his understanding there won't be drilling of any wells or septic systems. Mr. Naftel noted correct.

Mr. Lewis asked how the employees stationed on site will use the facilities. Mr. Neimann mentioned generally they are serviced by portable facilities or a depot nearby. Mr. Lewis asked about having a man-controlled room on site. Mr. Neimann noted there is no man-controlled rooms on site. Mr. Neimann also noted there is a facility in the substation where someone could sit and login but it is not a spot someone goes to everyday and works.

Mr. Lewis asked will there be any cameras on the sites to monitor situations. Mr. Neimann noted they do not put cameras on their sites typically.

Mr. Lewis mentioned he knows the panels follow the sun, but do they have the capabilities of being inverted for inclement weather. Mr. Neimann noted there is energy that can be produced in defused light. Mr. Neimann mentioned most manufactures have stow callability based on wind speed. Mr. Neimann also mentioned some stow flat, some stow into prevailing direction, others just build the structure that would withstand the local building code. Mr. Neimann noted Strata has not selected the manufacturer at this time.

Mr. Neimann stated all the panels will be designed to State and Local building code which states wind and snow load.

Mr. Lewis asked what the protocol is when retrieving hunting dogs or injured game from behind the fences. Mr. Neimann noted the corridors are open through the project. Mr. Neimann mentioned it is private land and it would be the same rules that govern private land.

Mr. Lewis noted it was mentioned solar panels lose their power or efficiency over the years and after 25 years they only produce 80% of the electricity. Mr. Lewis asked what is the cause of the loss of electricity and is it incremental over the life of its 30 to 40 years of handling. Mr. Cleveland mentioned it's the stacking up of a few different effects such as the glass but more so the encapsulant coming a little less clear and a little less light coming through. Mr. Cleveland also mentioned tiny bits of corrosion that makes it a little more electrical resistance. Mr. Lewis also asked if each panel is being monitored to see how efficient it is being. Mr. Cleveland noted it is not being monitored at the panel level but will be monitored at the combiner box level and after a number of panels are all connected together it will be monitored at the string level.

Mr. Lewis asked will the inefficient panels be replaced while still under contract. Mr. Neimann noted it is anticipated and if its below warranty level then a replacement would be asked for.

Mr. Lewis mentioned the initial influx of jobs that will potentially be created how many of those will be coming in from North Carolina. Mr. Neimann noted approximately 30-40 individuals from the Strata staff and a lot of the jobs would be hired subcontractors. Mr. Lewis asked if Strata would import living quarters for those individuals. Mr. Neimann mentioned usually it's house rentals or local hotels within an hour of the facility. Mr. Lewis asked the County is there enough housing to accommodate these employees. Mr. Quicke noted as for just Richmond County housing 400 people on a nightly basis for 18 months probably not. Mr. Quicke also noted the region could accommodate that many individuals.

Mr. Lewis asked if the full-time jobs offered are benefited. Mr. Cleveland noted yes, they are benefited. Mr. Lewis also asked are those jobs seasonal or all year round. Mr. Naftel mentioned these are year-round full-time employees.

Mr. Lewis noted from start to complete is this a one-year project or 18 months approximately. Mr. Neimann mentioned it would be weather depending but 14 months is a good estimate.

Mr. Lewis mentioned during the construction phase pre, during and post will any roads be closed to the general public. Mr. Neimann noted no roads will be closed and if there's only one access the to the property it has to be mitigated with a lot of mitigation methods handled through the land use permit with VDOT.

Mr. Smith asked how often do the panels get cleaned. Strata noted in this part of the Country the panels do not need to be cleaned.

Mr. Cox noted during the construction phase there has been a lot of concern about runoff and can it be contained during a catastrophic storm event. Mr. Neimann mentioned there's analysis for 2, 10, 25, 50- and 100-year storm events. Mr. Cox mentioned if we were to get 6-8 inches of rain what the impact will be from all that rainfall. Mr. Neimann noted Strata designs to the standards of DEQ. Mr. Neimann mentioned

every area disturbed is protected by diversion ditches and basins or silk fence protection with the most effective from ground cover.

Chairman Bowen asked what the DEQ regulations are that Strata designs too. Mr. Neimann noted 2,10,25,50 and 100 and all storms are modeled through the facility.

Mr. Packett asked if Strata has any affiliation with the Dunnsville (Essex County) solar plant if any. Mr. Neimann mentioned Strata has no affiliation with that facility. Mr. Packett noted that site was an environmental disaster.

Mr. Neimann noted the basins will not be taken out for protection. Mr. Packett mentioned timing has to be spot on for vegetated covering. Mr. Neimann noted Strata works very hard for ground cover.

Mr. Neimann mentioned there is always spots where either it didn't take or it ran off and until its closed out with DEQ and the County Strata is responsible for those same inspection intervals.

Mr. Smith noted when going on the site up and down the hills with a plow for example and water opens up a trench how would the contractor get back and forth to fill that trench up through the panels. Mr. Neimann mentioned in certain instances there is hand work and you can also stow the panels to allow accessibility. Mr. Neimann also mentioned a rack can be deconstructed if needed.

Mr. Mothershead asked about the parcel South to 601. Mr. Mothershead noted there's currently access through that section to other property owners and will that access be left for use. Mr. Neimann stated they have spoken to that property owner at a previous meeting and all the title work is not complete to tell exactly where the easements are but Strata will work with those property owners to make sure they have access.

### **OTHER BUSINESS**

*John W. Lewis made a motion to set up a public hearing for Monday, March 9<sup>th</sup>, 2020 at 7 p.m. J.R. Fidler seconded the motion and the motion carried with a vote of 10-0 (Rick Cox –aye; J.R. Fidler – aye; Glenn Bowen – aye; John W. Lewis –aye; Harry Smith, Jr. - aye; Cassandra Jackson – aye; Brian Mothershead – aye; Darnell Clayton-aye; Marion James Packett- aye; Brian Jackson- aye).*

Mrs. Mothershead mentioned Strata has invited the Commissioners and public to visit the Powhatan solar site prior to the public hearing.

Mr. Quicke noted if there are others outside the Planning Commission who are interested in going it can be worked out through the Planning and Zoning office to facilitate if needed.

Mr. Quicke stated the County Attorney noted anything done as a Planning Commission or Board of Supervisors is deemed a public meeting and would have to be advertised.

Mr. Quicke mentioned if the Planning Commission makes a recommendation to the Board of Supervisors the Board of Supervisors will start the process again and possibly schedule a visit for them at a separate time.

Mr. Neftal noted Strata will provide the protective equipment and asked those going to wear closed toed shoes.

**ADJOURNMENT**

There being no further business, Glenn Bowen adjourned the meeting.

Respectfully submitted,  
Liz Hylan  
Commission Secretary

# Strata Solar "Bookers Mill"

February 10, 2020

1

## Zoning Overview – Special Exception/CUP

- All parcels of land in Richmond County are zoned for specific uses of the property, to include:
  - A-1
  - R-1
  - R-2
  - R-3
  - B-1
  - M-1
  
- Within these zoning districts, uses of the property are categorized into permitted uses, known as by-right uses, or uses by special exception.
  - If the proposed use of the property is not listed in either of the above categories for that particular zoning district, then it is a use not provided for, and if the owner of the property wishes to proceed, he or she must go through the re-zoning process in order to fit their need into another zoning category within the county.

2

## Zoning Overview – Special Exception/CUP

- Specific to our current project, the land we are being asked to consider for a solar facility is located within an A-1 district of the County. Permitted uses within A-1 in Richmond County include:
  - Farming and Forestry
  - Single Family Homes
  - Individual Manufactured Homes
  - Boat Docks
  - Churches
  - Schools
  - Parks, Playgrounds and Community Facilities
  - Home Occupations
  - Cemeteries
  - Greenhouses and Nurseries
  - Golf Courses
  - Public Boating and Fishing
  - Preserves or conservation areas
  - Child Care Facilities
  - Home Professional Offices, with stipulations
  - Accessory Structures
- Permitted uses mean exactly that. These are uses of the property that need no further consideration from the Planning Commission or the Board of Supervisors, and that provided the regulatory permits are filed for and granted, construction can begin.
  - Regulatory permits could include: Zoning Permit, Site Plan Review, Erosion and Sediment Control, Stormwater Management, Building Permit, etc.

3

## Zoning Overview – Special Exception/CUP

- Also listed within the ordinance of the zoning districts is all uses that are allowed within that district, after receiving a Special Exception
  - These are generally uses that are compatible within the particular zoning district; however they could be more intensive or intrusive than the permitted uses; therefore require special consideration from the Planning Commission and Board of Supervisors prior to approval.

4

## Zoning Overview – Special Exception/CUP

- Special Exception Uses in A-1
  - Bed and Breakfast
  - Retirement Home or home nursing facility
  - Commercial Animal Kennels
  - Sand and Gravel mining
  - Campgrounds
  - Livestock Auction Markets
  - Fire Stations or Rescue Squad Facilities
  - Rifle or Pistol Shooting Range
  - Sewage Treatment Facilities
  - Intensive livestock or poultry operations
  - Re-establishment or conversion of use in existing structures that have previously been retail establishments
  - Commercial Marina and Facilities
  - Antique Shop
  - Post Office
  - Contractor Equipment Storage Yard
  - Clubs or Lodges for Hunting or Fishing
  - Facilities for rendering local public utility service
  - Migrant or seasonal worker housing
  - Private airstrip
  - Wireless telecommunications facilities
  - Assembly or Retreat Center
  - Limited Food Service and Sales
  - Solar Power Facility

5

## Zoning Overview – Special Exception/CUP

- When considering and granting a Special Exception to an applicant or landowner, the County has the ability through special conditions to further limit and restrict the way the property is used and to require more stringent regulations, than what would otherwise be required.
  - For the purpose of reducing the impact to adjoining properties and in keeping the best interests of the County in mind.

6

## Zoning Overview – Special Exception/CUP

- How does the Planning Commission play into this process?
  - The Planning Commission is tasked through the Code of Virginia as well as the Ordinances of Richmond County to hear and consider the request of the applicant, hold a public hearing on the matter, and make recommendations to the Board of Supervisors either through recommended approval, denial or approval with conditions.
  - Recommendations made by the Planning Commission, to the Board of Supervisors are simply that, recommendations.
    - The Board of Supervisors will then have the ability to review the application, hold additional work sessions, hold public hearings and then ultimately make a decision on the request.
    - Although the Planning Commission only makes a recommendation to the Board of Supervisors, that is not to say that the work done at the Planning Commission level is un-important, it may be the most important.

7

## Zoning Overview – Special Exception/CUP

- Are there questions on the process prior to discussing the application?

8

## Bookers Mill Solar Suggested Conditions to Consider

- Buffers and Setbacks
- Roads and Public Right of Way's Pre, During and Post Construction
- Erosion and Sediment Control/Stormwater Management, other environmental impacts during and post construction
- Costs to Richmond County due to review, inspections, permitting, etc.
- Impacts to Historical Resources within Project
- Decommissioning of project at end of life

9

## Bookers Mill Solar Suggested Conditions to Consider

- Buffers and Setbacks
  - Proposal of greater buffers and setbacks from original application to include:
    - All areas in which solar panels can be seen or viewed from the Public Right of Way, increase setback requirement to 300' from right of way.
      - There are two cutovers along the proposed site that this condition would affect.
    - All areas in which there is a thick stand of timber along the public right of way, increase the amount of trees left or uncut to 100' from the applicants proposed 50'.
    - All areas in which there are existing power lines adjacent to the Public right of way, but set back greater than 20' from the road, and there is standing timber on the opposite side of the powerlines, increase the amount of left or uncut trees to 75' from the applicants proposed 50'.
    - No portions of the solar project shall encroach to within 500' of any residence in which the solar project is on the same side of the public right of way as the residence, and in instances in which the solar project is located across the public right of way from the residence, the setback shall be no less than 250'.
    - Minimum buffer around RPA delineated areas of 200' as opposed to the mandated requirement of 100'

10

## Bookers Mill Solar Suggested Conditions to Consider

- Roads and Public Right of Way – Pre, during and post construction activities.
  - Prior to construction, applicant along with County and VDOT shall inventory all public roads that will be impacted by construction activities, and note deficiencies that need immediate attention.
  - During Construction, applicant along with County and VDOT will monitor roads for damage.
  - Post Construction, applicant along with County and VDOT will inspect all public roads and right of ways for damage. Applicant will be responsible for fixing all damage associated with the Construction project.
  - Prior to issuance of land disturbing permits, applicant shall furnish county with surety bond, letter of credit or cash bond in an agreed upon amount of estimated costs to fix roads and right of ways, post construction.

11

## Bookers Mill Solar Suggested Conditions to Consider

- Erosion and Sediment Control, Stormwater Management and other environmental impacts during and post construction activities.
  - Plans to go through all required review and permitting process through the County and the State.
  - Richmond County would contract with third party engineering firm to help with plan review and inspection, with the costs being paid by applicant.

12

## Bookers Mill Solar Suggested Conditions to Consider

- Costs to Richmond County due to review, inspections, permitting, etc.
  - Richmond County would contract with third party engineer for plan review and site inspection, pre, during and post construction.
  - Costs associated with these functions would be billed to applicant.
  - Attorney fees associated with project review and guidance would be billed to applicant, starting January 1, 2020.

13

## Bookers Mill Solar Suggested Conditions to Consider

- Impacts to Historical Resources within Project
  - Any historical resources noted within Richmond County Comprehensive plan, or otherwise, would have to be identified, marked and preserved at a buffer and setback of at least 100’.

14

## Bookers Mill Solar Suggested Conditions to Consider

- Decommissioning of project at end of life
  - The applicant shall submit a decommissioning plan with the first submission of the site plan.
    - The decommissioning plan shall include specifications for the removal of all solar equipment, buildings, cables, electrical components, foundations, pilings, roads, and fencing to a depth of 36'.
    - The property must be restored to the agricultural condition of the property as of the date of approval, with the additional requirement that the property must be stabilized so as to adequately control, prevent, and minimize any all erosion and sediment runoff. Prior to stabilization, all soils compacted by the decommissioning work or by construction or operation of the facility shall be de-compacted, scarified and restored six inches in depth.

15

## Bookers Mill Solar Suggested Conditions to Consider

- Decommissioning of project at end of life
  - The applicant shall provide surety to guarantee that the decommissioning work can be performed by the County if not performed by the applicant as required.
    - Surety in the form of cash bond, letter of credit, or surety bond
  - Decommissioning costs shall be estimated prior to the project beginning, and shall be evaluated every 5 years thereafter and bond amounts shall be reconsidered every five years for increase, decrease or to remain the same.
  - Should owner default or go out of business, County shall have the ability through Letter of Credit, Cash Bond or Surety Bond to have all required conditions met.

16

## Bookers Mill Solar

### Suggested Conditions to Consider

- Please note that the suggested conditions that have been reviewed are not all inclusive to what will be considered should this project move forward, this is simply a beginning of addressing many of the concerns and conversations we have heard.



**Bookers Mill Solar, LLC**

**Special Exception Permit Application**

**Richmond County, VA**

**Planning Commission**

**January, 2020**



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**Bookers Mill Solar Application Team**

- **Jackson Naftel, Strata Solar, Director of Development**
- **Chelsea Woodfin, Strata Solar, Development Manager**
- **Louis Iannone, Strata Solar, Zoning Manager**
- **Brent Neimann, PE, Strata Solar, Director of Civil Engineering**
- **Katherine Hill, Strata Solar, Vegetation Manager**
- **Richard Stuart, Attorney for Strata Solar**



## **Bookers Mill Solar Application Consultants**

- **Mangum Economics - Economic and Fiscal Contribution Report**
- **Pilot Environmental - Environmental Studies**
- **Dutton + Associates - Cultural Resource Assessment**
- **Ballentine Associates, PA - Decommissioning Cost Estimate**
- **Christian P. Kaila & Associates - Property Impact Analysis**
- **NC Clean Technology Center - Solar Health and Safety Report**

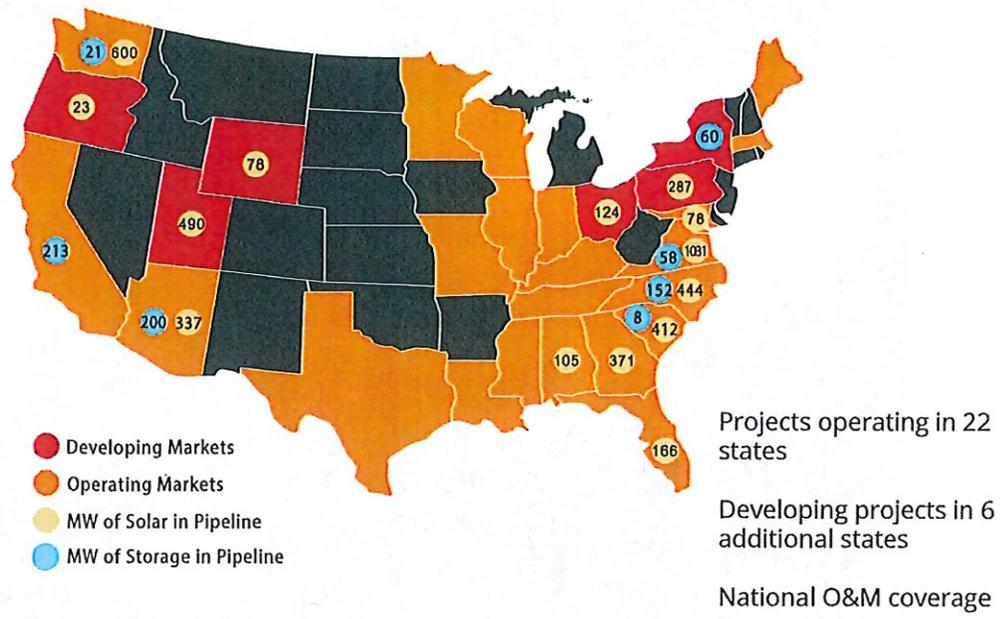


## **Strata Solar**

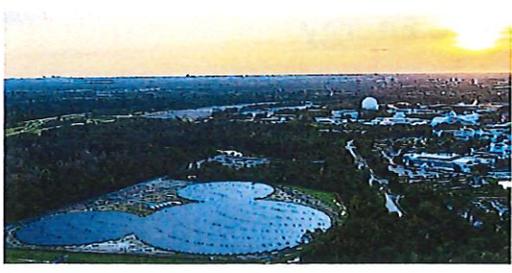
- **One of the Largest Solar Developers in US**
- **Operate the Solar Equivalent of Two Nuclear Power Plants**
- **400 Professional Staff + 1,000 Construction Staff**
- **Fully Integrated Developer**
  - **Develop**
  - **Engineer**
  - **Construct**
  - **Finance**
  - **Own**
  - **Operate and Maintain**



No other company has developed and constructed more utility-scale solar projects than Strata Solar



### Featured Utility-Scale Projects



**REEDY CREEK**  
5.3 MW - Orlando, FL



**BUTLER**  
29 MW - Butler, GA



**WARSAW**  
88 MW - Warsaw, NC



**SELMER**  
20 MW - Selmer, TN



**MONROE**  
74.9 MW - Monroe, NC



## Strata Network Operations Center

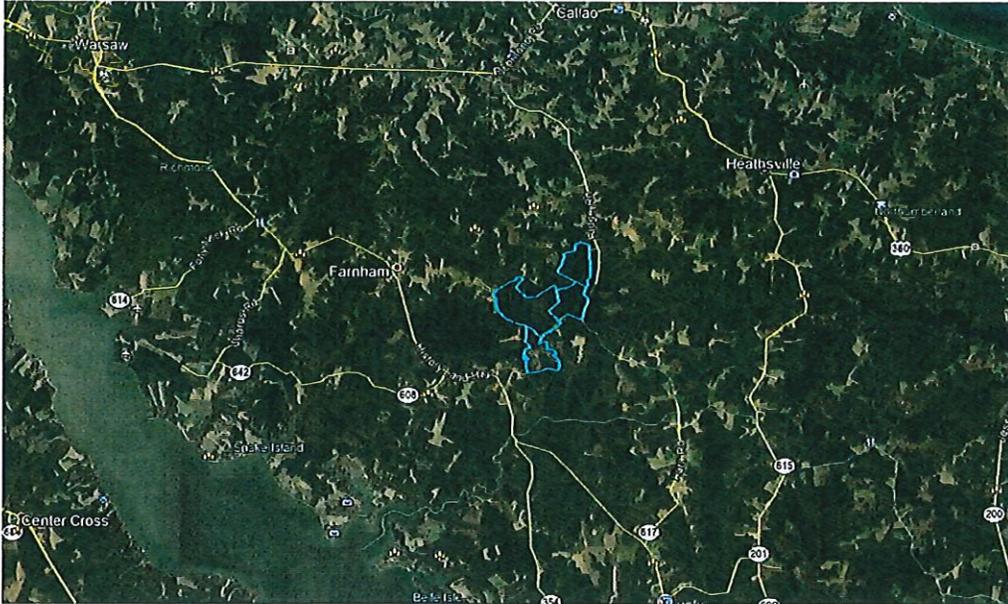


### Bookers Mill Solar Overview

- **127 MW Clean, Safe, Renewable Energy**
- **800 Ac. Solar Equipment**
- **800 Ac. Resource Protection Areas and Buffers**
- **\$200,000 Initial Richmond County Tax Revenue**
- **400 Temporary Construction Jobs**
- **10 - 15 Permanent Maintenance Technician Jobs**
- **Permanent Maintenance Facility**



# Bookers Mill Solar Location Map



## Bookers Mill Solar Site Plan



# Bookers Mill Solar Site Plan



## Bookers Mill Solar Schedule

Project Phase	Sub-Category	Timeline
Development	Due Diligence Studies & Permitting	Jan 2019 - Sept 2020
	Interconnection Studies & Agreements	April 2019 - Sept 2020
Engineering, Procurement, Construction	Equipment Procurement	May 2021 - Aug 2021
	Civil Site Work	July 2021 - Nov 2021
	Structural Rack Installation	Dec 2021 - Feb 2022
	Solar Panel & Wiring Installation	Feb 2022 - Aug 2022
	New Substation Construction	May 2022 - July 2022
	Testing and Commissioning	Aug 2022
	Operation and Maintenance	
Decommissioning		Aug 2052 - Feb 2053



## **Bookers Mill Solar Application Overview**

- **Compliance with Solar and Special Exception Ordinances**
- **Extensive Environmental Studies**
- **Economic Impact Analysis**
- **Property Impact Analysis**
- **Decommissioning Plan and Cost Estimate**
- **Construction Traffic Plan and Road Repair Bond**



## **Statement of Justification**

- **Clean, Safe, Renewable Energy**
- **High Demand for Solar Energy from Dominion Power and Fortune 500 Companies including:**

**Apple, Google, Amazon, Microsoft**

- **Data Centers in Northern VA**
- **Strong Economic Impact**
- **Low Environmental Impact**



## **Statement of Justification – Economic Impact**

- **New, Growing Industry in Virginia**
- **Generates Millions in Local Spending on Goods and Services**
- **Nearly \$200,000 of Additional Initial Tax Revenue**
- **\$3,440,000 of Additional Life of Project Tax Revenue**
- **No Cost for Services from County**



## **Statement of Justification – Economic Impact**

- **Generates Local Job Growth for Construction Trades**
- **400 Construction Jobs**
- **Local Hires are often Retained and Promoted**
- **10 - 15 Permanent Maintenance Technician Jobs**
- **Local Maintenance Facility to Store Equipment and Parts**
- **Second Project Maintained in Area (Montross)**



## **Statement of Justification - Environmental**

- **Extensive Environmental Studies and Permitting**
- **Preserves Large Areas of Stream and Wetland Buffers**
- **Preserves Wildlife Corridors**
- **1% of 74,000 acres of Richmond Co. Timber Impacted**
- **Virtually No Farmland Impacted**



## **Statement of Justification - Low Public Impact**

- **Does Not Endanger the Public Health or Safety**
- **No Hazardous Materials**
- **No Noise**
- **No Emissions**
- **No Electronic Communication Interference**
- **No Air Traffic Interference**



## **Statement of Justification - Low Public Impact**

- **Construction Traffic is Routed and Managed**
- **Road Repairs are Bonded**
- **Low Long-Term Traffic**
- **Salvage Value Exceeds Decommissioning Cost**
- **Substantial Buffers and Fencing Where Needed**
- **Does Not Impact Property Values**



**January 6, 2020 Planning Commission Questions**



- **Visibility / Buffers**
- **Rural Character**
- **Herbicide Use**
- **Sec 2232 Substantial Accord with Comprehensive Plan**
- **Hazardous Materials in Panels**
- **Decommissioning**
- **Property values**
- **Economic Impact**



### **Visibility / Buffers - New Site Plan Conditions**

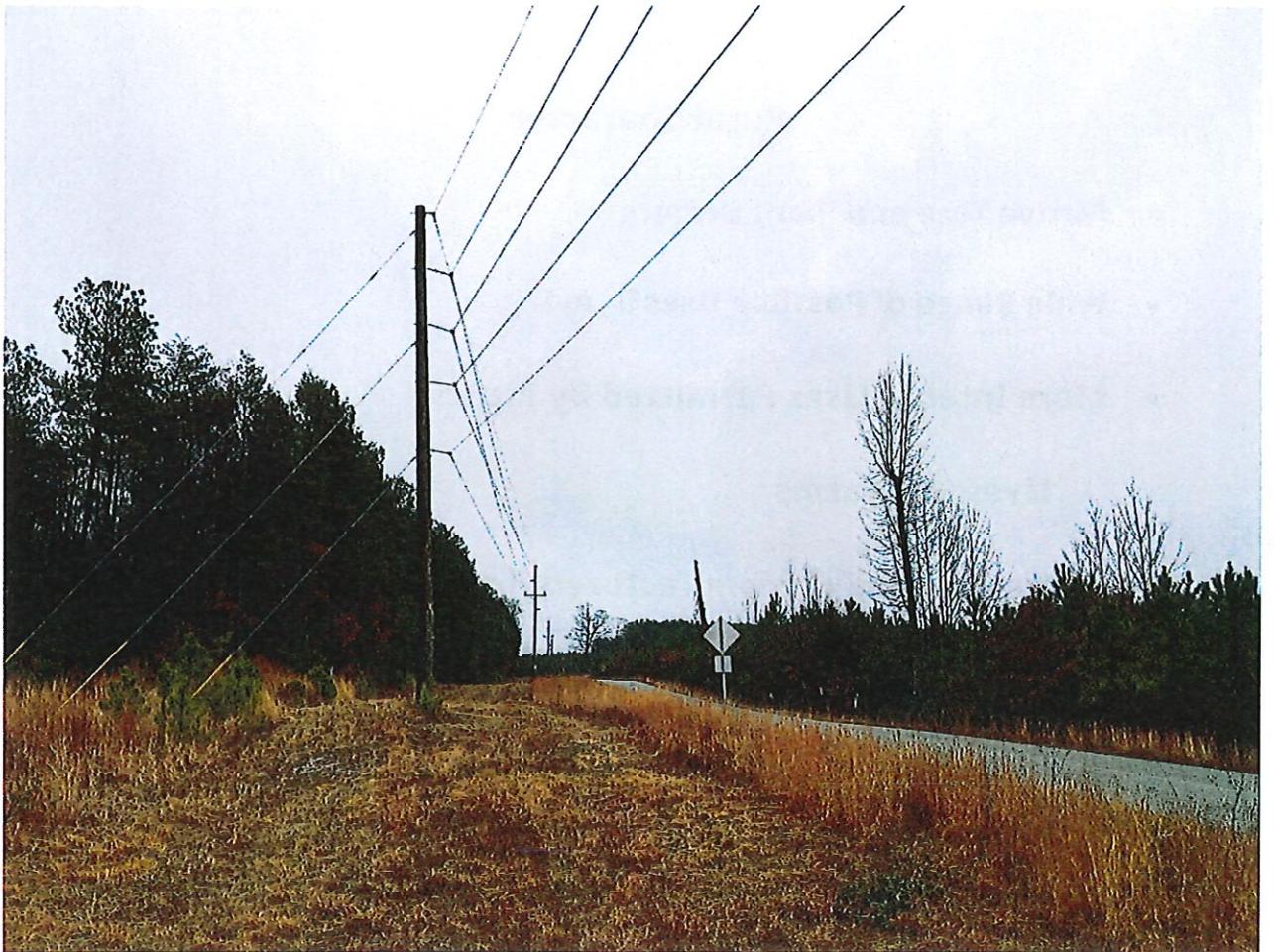
- **Brent Neimann, PE**
- **Established Minimum Setback from Homes of 400 Feet**
- **Established 100-Foot Preserved Buffers Adjacent to Homes**
- **Doubled Setbacks from Roads to 100 Feet, including**
  - **50-Foot Vegetative Screen, Existing and Planted**
  - **50 Feet of Additional Space with Natural Growth, Native Grasses and Pollinators**



## Buffer Composition

- Kathryn Hill, ASLA
- Existing Buffers, Native Vegetation where Possible
- Supplemented with New Native Trees/Plants where Necessary
- Native Trees and Plants Grow Quickly and Densely
- Contract with Northern Neck Forester for Replanting
- Pollinators





## Herbicide Use

- **Kathryn Hill, ASLA**
- **No Herbicides in Buffers**
- **Any Use of Herbicides Regulated by State and Federal Law**
- **Licensed Commercial Herbicide Applicators**
- **All Project Owners have Strict Herbicide Safety Requirements**



## Rural Character

- **Native Tree and Plant Buffers**
- **Wide Range of Possible Uses in A-1**
- **More Intense Uses Permitted By Right:**
  - **Livestock Farms**
  - **Single-Family / Manufactured Housing Development**
  - **Commercial Greenhouses**
- **Not a Choice Between Solar and No Possible Change**



## **Sec 2232 Substantial Accord with Comprehensive Plan**

- **Similar to Other Rural Uses**
- **Solar Ordinance Adopted by Board of Supervisors for A-1**
- **Goal 1: Protect Archaeological and Historic Resources**
- **Goal 2: Protect Natural Resources and Environment**
- **Goal 3: Protect Groundwater**
- **Goal 4: Protect Rural Character, Farming, Fishing, Forestry**
- **Goal 6: Enhance Tax Base and Job Opportunities**



## **Sec 2232 Substantial Accord with Comprehensive Plan**

- **Virginia Senate Bill 966**
- **Virginia Energy Plan**
- **5,000 MW of Utility-Owned and Utility-Operated Wind and Solar Resources Deemed in the Public Interest**
- **Finding of Public Interest - Diligent Study of Costs and Benefits**
- **§ 67-103. Role of local governments in achieving objectives of the Commonwealth Energy Policy.**



## **Hazardous Materials in Panels**

- **Existing Regulations - EPA, VA DEQ, Chesapeake Bay**
- **Any Discharge would be a Violation of Existing Regulations**
- **VA DEQ Permit By Rule - Requires All Environmental Permits**
- **Dominion, Corporate Power Purchasers, Investors, Banks**
- **Virginia Energy Plan Based on Two Years of Studies**
- **VA DEQ, Multiple Public and Private Parties Contributed**
- **Over 300 Operating Solar Farms in NC and VA**



## **Hazardous Materials in Panels, Decommissioning**

- **Tommy Cleveland, PE**
- **Very Small Amounts of Potentially Hazardous Materials**
- **Physically and Chemically Sealed**
- **EPA Tests**
- **Useful Life of Panels - 80% @ 25 years**
- **Salvage Value Far Greater than Decommissioning Cost**
- **Re-use or Recycle after Decommissioning**



## Property Values

- **Christian Kaila, MAI**
- **Substantial Buffers to Screen Visibility**
- **No Noise, Emissions, Traffic, Light**
- **10 Years of Property Sales Analysis in NC**
- **No Evidence of Price Reduction from Actual Matched Pairs**



## Economic Impact

- **A. Fletcher Mangum, Ph.D.**
- **400 Construction Jobs, \$16 million Labor Income**
- **12 Permanent Operations Jobs, \$446,000 Annual Labor Income**
- **\$1.4 Million State and Local Tax Revenue One Time Addition**
- **\$3.6 Million Cumulative County Revenue**
- **3% Increase in County Property Tax Base**



## **GenX Contamination in NC**

**GenX is a PFAS Compound Commonly Found in Household Products including Food Packaging**

**Chemours Plant Discharged GenX Chemical into Cape Fear River**

**Discharged Chemical Upstream of Wilmington Water Supply**

**One of the Biggest EPA / NC DEQ Violations in NC History**

**--- NC Website Article re PFAS in Some Solar Panels**

**--- Northern Neck News Statement**