Buckingham County
Planning Commission
Monthly Meeting
Packet

January 24th 2022

Buckingham County Planning Commission Agenda
Monday, January 24, 2022 7:00PM
County Administration Building
Peter Francisco Meeting Room
www.buckinghamcountyva.org

You may view the meeting by logging on to

1. Call to Order by Zoning Administrator

   Invocation
   Pledge of Allegiance
   Establishment of Quorums

2. Consider Vote for the Seating of Chairman of the Planning Commission
3. Consider Vote for the Seating of Vice Chairman of the Planning Commission
4. Approval of the 2022 By Laws and Rules of Procedure
5. Adoption of Agenda
6. Approval of Minutes

   A. December 27, 2021 Regular Meeting

7. Public Comment
8. Old Business

   A. Public Hearing Case 21-SUP294 Joseph Kauffman
   B. Continuation Case 21-SUP298 Ike Yoder
   C. Planning Commission 2022 Calendar

6. New Business

   A. Introduction Case 22-SUP299 Apex Riverstone Solar

7. Reports
    A. Building Permits Report
    B. Zoning Administrator Report

8. Commission Matters and Concerns

9. Adjournment

In response to the COVID-19 epidemic, Public Comments AND Public Hearing Comments for Buckingham County Planning Commission Meetings and Hearings will be received using the following methods:

1. Written comments may be mailed to the Planning Commission at PO Box 252 Buckingham, VA 23921. Please limit word count to 500 words.

2. Emailed comments may be sent to publiccomments@buckinghamcounty.virginia.gov. Please limit word count to 500 words.

3. Telephone voicemail comments may be left to be played to the board by calling 434-969-5039

4. To appear virtually to the Planning Commission for comments please email publiccomments@buckinghamcounty.virginia.gov. You will receive notice with the link and/or telephone number necessary to connect virtually during the meeting.

5. In person Public Comments will be permitted by signing up (signup sheet) to speak prior to the beginning of the meeting

Please note: Please state your name, district, address, and which hearing you are commenting on. The three (3) minute rule will apply to public comments. All correspondence must be received only by the methods above, and are due by 12:00 PM Eastern Standard Time the day of the meeting.

Buckingham County
Planning Commission
December 27, 2021

At a regular meeting of the Buckingham County Planning Commission held on Monday, December 27, 2021 at 7:00 p.m. in the Peter Francisco meeting room, located within the Buckingham County Administration Complex, the following members were present: Board of Supervisors' representative Danny Allen. James D. Crews III; Steve Dorrier; Joyce Gooden. Stephen Taylor. Also present were Nicci Edmondston, Zoning Administrator, and E.M. Wright, Jr., County Attorney. Ashley Shumaker, Patrick Bowe and John Bickford were absent.

Re: Call to Order, Quorum Present, Invocation, and Pledge of Allegiance

Commissioner Steve Dorrier called the meeting to order. Joyce Gooden gave the invocation, Steve Dorrier led the Pledge of Allegiance and it was said by all who were in attendance. Steve Dorrier certified there was a quorum- five of eight members were present. The meeting could continue.

Edmondston: December 27 2021 Planning Commission meeting to order this evening, we'll be asking the planning commission if they would elect and take nominations from the floor for a chairman pro tem and a vice chair pro tem, as our chairman Pat Bowe and Vice Chair John Bickford are not here for this meeting with us tonight.

Allen: I'll make a motion that we get Steve Dorrier as Chairman.

Gooden: Second.

Edmondston: Can I get a show of hands. All in favor.

Allen: All right you're in charge tonight.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to nominate Steve Dorrier as pro tem Chairman.

Dorrier: Next thing would be to nominate a vote for vice chair for tonight.

Allen: I make a motion for Joyce to be the vice chair.

Dorrier: Do I have a second.

Crews: Second.

Dorrier: I have it motioned and seconded that Joyce be the vice chair for tonight. All in favor Raise your right hand. So Moved.

Supervisor Allen moved, Commissioner Crews seconded, and was unanimously carried by the Commission to nominate Joyce Gooden as pro tem Vice-Chairman.

Dorrier: Adoption of agenda.

Gooden: So moved.

Allen: Second.

Dorrier: All in favor of the adoption of agenda, please raise your hand. Approved.

Commissioner Gooden moved, Supervisor Allen seconded, and was unanimously carried by the Commission to approve the agenda as presented.

Dorrier: Approval of minutes.

Gooden: So moved.

Allen: Second.

Dorrier: We have approval of minutes and second. For the last meeting. All in favor of that please raise your hand. So moved five of five. Public comment?

Commissioner Gooden moved, Supervisor Allen seconded, and was unanimously carried by the Commission approve the minutes as presented.

Edmondston: Yes, sir. Mr. Chairman, we have one individual signed up for public comment. It's Marie Flowers.

Marie Flowers: I want to wish you all a happy holiday. And I'm here to complain. There is a public notice for hearing for Mr. Kaufman, who lives and owns property on Buckingham Springs Road. And he was supposed to have a public hearing tonight. On his property to be zoned to make sheds and whatnot. And in the newspaper. Two weeks, it was wrong. The address and the zoning application was the same as for Mr. Burmaster. And both of the zoning requests are for

Mount rush highway. And it just seems to me that a decision that this hearing could have been made public a lot sooner. Has any of you seen this in the paper? Do you all look at the zoning notices in the paper to make sure that they're correct. Anyway, there were a number of people who have come here tonight interested in the issue on Buckingham Springs Road. And they haven't stayed of course, but I just want to, there's got to be a better way. I mean, do we have to wait until Miss Edmondston asks you? Is this not illegal? Isn't it legally required that the zoning requests be two weeks ahead of time and if they're incorrect that they should just automatically be postponed.

Allen: Yes, ma'am we will take care of that when it comes up.

Flowers: Anyway, that's my comments. Keep your eyes open when you're zoning requests so that you know what's in the paper. I'll sell so that the people who are interested and live near any of the properties have an opportunity to respond. Thank you.

Dorrier: Thank you. I did read the paper and what was in there I thought was correct. Am I wrong Nicci?

Edmondston: The address is incorrect that all request Mr. Kaufman's application is not. That's all correct. What's incorrect is the address. So tonight when we get to his public hearing, in lieu of that incorrect information, I'll be asking you if you'd like to hold that in January, but his is not the first case to come up tonight.

Dorrier: We have any more public comment?

Edmondston: That's it for this public comment period.

Bowe: Going to close that. Okay. Public comment is closed. Old business.

Edmondston: First case this evening is a public hearing for case 21SUP287. James Burmaster. It's located at tax map 158 parcel 11. It contains approximately 103.7 acres. It is at 5481 Mount Rush highway Dillwyn Virginia. In the James River magisterial district. It's currently zoned a one and his request is to obtain a special use permit for the purpose of operating an Airbnb and Bed and Breakfast with events. Mr. Burmaster states in his narrative that the main purpose for this application is to have events at his farm for all different types of shows such as music, car shows, live concerts, he would like to entertain 3500 guests for these events, which is included in the narrative and Airbnb, etc. Mr. Burmaster presented his initial application in August, but after discussion with the planning commission, he decided to resubmit with changes. This is his application requests. There are currently 12 conditions that have been suggested and may be considered. Any amendments or deletions of those are always welcome. Mr. Burmaster is here with us this evening to address any questions or concerns and we do have four people signed up for the public comment period for this public hearing.

Dorrier: Carl would you like to come up and tell us a little bit of your plans again, I know we've been through this several times, but for our benefit, I think it would help

Carl Burmaster: I've been up here several times. Just a quick get up with me. You know, I've lived here 17 years been hunting here 35 years' way back days on week 636 with Stafford. I've been here a long time. Never been since I've been here never have families had a place to take their family to have a good time. You know, they go and do things would be picking up loud music whether it be a car show, you know, bought this farm from Susan coffee and she initially wanted to do something like this and she her health didn't get as good so she moved to a small house and bought the farm. So I went ahead and put in my application, the 3500 people I would like to get permission to do that maybe two to four times a year. That's it not all the time. Weekly bi weekly. I would like to have a car show which may be a local band local music. You know what it may be just to get people out there to be able to enjoy my farm. We have a 33-acre lake out there. We have plenty of room. We have already addressed the VDOT situation we've got 300 yards of road frontage. They told me what I need to do if you know I don't suspect any type of that number to happen this year. This is a learning phase to me you know I've never done anything like this before in my life. This is you know, I'm a musician. So always put band in there but it may not be a band who know. But I have plenty of road frontage had okayed by the Vdot miss Snoddy is here I had her engineer came out to the lake and showed him what I wanted to do and he wrote letters, no affects to the lake anything like that. So basically, especially on the paper, I just want to have live events and I want to do what I can do and I want to keep the nature I want to keep it pretty you know I want to try to I don't want to mess nobody up you know the way if you look at the paper, the way you have to but the way you look at the way that the spillway is most of the smaller events will be up above On near the spillway, but if it gets too large to be on the spillway with this portable stage appointment, whatever, and the way it's cut it the music's directed eastward, and it's going up like that. So I don't feel like you know, I don't want to affect anybody's peace anybody's you know, anything like that because I live in the country and I like my peace I like to fish in that lake I take care of the lake. You know, the best I can pick up the trash comes down the Creek all the time from that lake. It comes into the lake and we got criminals out. So this isn't about big money making venture for me. It's yeah, do I want to pay my bills and try to perform with it? Yes. But it's really about Buckingham and I'd like to have youth groups come out here I like to have, you know, first responders come out here fire departments, and just to enjoy the place. It's a beautiful place, and I would employ any on any day, you want to come out. And I'll take it down and y'all just take a look. See what questions you think you may have ill answer anything.

Dorrier: Does anyone have any questions from the board? Or Open public hearing now.

Edmondston: And Mr. Chairman, there are four signed up to speak this evening. Regarding this case, the first one is Michelle Soltesz actually Carl Burmaster signed up to speak.

Michele Soltesz: Hi, I'm Michelle Soltesz and I'm actually one of the landowners, I'm on the other side of the lake. I've got about 50 acres on the other side around the corner. So I'm here tonight. First of all, Nicci, thank you. For getting me back on the list, I think I was inadvertently

left off the last go around. So I'm in general, I'm in support of the application. But I'm here hoping for stipulation. So the unique differentiator for this property is actually the lake. You know, if you're going to have events and all that stuff, you're going to have people taking pictures, it's a beautiful body of water. In fact, that's why I invested on the other side so that I can enjoy the serenity and the beauty of that actual body of water. So but as far as I've been able to see in this application, there's very little language that talks about the steps that are going to be taken to preserve the quality of water. And if any of you guys have been out there lately, you'll see that the lily pads, the weeds, blue algae, are overtaking in and choking out the surface area of the lake. So if this is to move forward, I'd really like to get the commitment of the Burmaster to contribute to the cleanup work that I want to start, and then hopefully take around to the complete body of water. So that's my comment. Thank you.

Edmondston: The next individual signed up to see speak is Matthew English, followed by Chad Perkins.

Matthew English: Good evening.

Dorrier: If you could state your name for us please.

Matthew English: Matthew English. I was approached by a letter that was presented by the county. I'm a landowner, and all my family has lived on that lake their whole life back in 1985, that lake... construction was being built when I was being born. And my family owns over 60% of that lake. That's sacred ground for us. By all means, we want to be good neighbors, Mr. Burmaster. And we look forward to doing that. But concerts and over 3500 individuals in downtown Toga. That brings a big concern. Also, another big concern is the condition of the property. If you haven't drove by there, you need to I don't know what kind of venues will go on there. But the way the condition is now, that's not inviting. It is a beautiful property. And it's been home to many of us for many years. You know, 3500 people, like I said, and Toga. It's not that big of a community. And that brings big concerns, concerts, car shows and things like that. But like I said the condition, the number of people that he's stating and what they own and what the adjoining landowner owns brings big concern. I would appreciate if y'all would take this and make consideration that you know before y'all pass anything that y'all go out there look at this property and look at what he's proposing I greatly appreciate that thank you for your time thank you.

Edmondston: Chad Perkins.

Chad Perkins: Chad Perkins the house beside Mr. Burmaster im the driveway adjacent to him. We just moved in, in August. families lived there. All my life. That lake we grew up on me and my brother, Matt. Every weekend that's where we stayed. Like he said, we own pretty big portion that lake always have. I have no problem with Mr. Burmaster doing whatever they want to do. Welcome to have whatever you want to have. I just want to make sure, I have three small kids. There One, three and five. Got a lot of years ahead of us and then growing up in that house. Just want to make sure every Friday and Saturday night were not listening to loud music till

midnight, that's my biggest thing. I have no problem with anybody having a venue that's great. Me and my wife were married at a venue that's great but just want to make sure that we're not staying up to midnight with three small kids on Friday and Saturday listening to music other than that I have I take no concern I'm glad you do whatever you want to do as your as your property. Good neighbors we've hunted that. We hunted Susan's place all our life. Needed anything we're there you know, we're good neighbors but just don't want to listen to loud music on Friday and Saturday nights you know till midnight that's my biggest thing. Other then that I don't have anything to say.

Allen: You'd rather see a day party?

Perkins: That's fine. you know we got to Lake we don't really care for people you know during the day we own a big portion of that lake we don't care about people coming out there and having all these boats on the lake during the day and partying. We don't... we don't really want that you know, we fish on there, take the kids out fishing we don't want to be out there with 20-25 boats and all this stuff people partying during the day you know we don't want that but whatever you want to do Hey, it's that's your thing, but we just want to keep toga civil you know. That's all I've got. Thank you.

Edmondston: No one else signed up to speak Mr. Chairman.

Dorrier: Mr. Burmaster. Okay, let me close the public hearing.

Burmaster: First of all, which I said I have no intention to have any events at night at all. That was my next question. Otherwise, it's a lot easier to operate during the data because you can see what's going on. I don't foresee a large amount of people this year at all I got to kind of take it slow as I go. As far as the property it is dilapidated. I've been working on it you know walk with two canes lost both parents this year and I have kidney cancer so slowed me down considerably for the last seven months I lost two parents in seven months had kidney cancer in three months to recover from that. So yeah, I'm one person my son works 70 hours a week he's another person but we will have it ready to go when it's time to go and you're more than welcome to come and look at it and see what I've already done to it. Not on the outside yet. Most of them dilapidated buildings are coming down im not fixing old Turkey barns or anything they're all coming down only thing I'm fixing is the house spoke to Tripp Maxey he's going to build me a outdoor pavilion down on the upper side of the spillway. And for Chad also, the lake is off limits for any events. So it's not it's not going to be if there's any events down there. It's going to be a partitioning going across. Nobody's going to be in that lake. That's the insurance nightmare. And it's just happened I love that lake. I'm not going to let anybody down there. I fished it for many years too. I've lived there a long time so that being said, you know, daytime thing that he's concerned about I agree I mean, I agree with him 100% You know I don't I don't think it should be the nighttime music. I hear hounds barking all the time at three o'clock in the morning and it keeps me up at night so I know what they're talking about. It's peaceful out there for the most part except for the highway. you know most venues operate at 95 decibels, which is no more than a truck coming down the road. Big concerts are 120 decibels. That's talking big, big

concerts. I mean, so it's and what that location is, I'm willing to work with anybody to do anything. As far as the house being worked on, yes, it is being worked on, and it's going to take me six more months to get the house ready. And the two Turkey barns to be knocked down. I got a crew coming in there with bulldozer and equipment, and they're going to clean the place up your fencing and everything. I didn't want to jump the gun and go to the bank. So I know to do all this unless I knew this was going to be approved. I just asked y'all to give me a chance I'll work with my neighbors the best I can. I know not everybody's going to be happy. But I'll try to make everybody happy. Because that's just how I am.

Dorrier: Should we put in a stipulation maybe a time I know you said you weren't going to have a time problem.

Burmaster: Daytime. Summertime, don't get dark to probably eight o'clock in the summertime, I would never see anything going past eight o'clock. Even that's that cleanup. During the summertime in the wintertime, I don't want to have anything because I don't like the cold. So as far as the 3500 people are talking about, that might be twice a year, if it ever happens, I just submitted to the county so that they won't have to come back to the county. And as far as the algae in the lake, I didn't put that out in the lake God did. And if you see the upper end of that lake, that's where all the silt comes in. Okay, it's probably two-foot-deep, maybe a foot deep, other than the lake is deeper, you're never going to stop it. You could spend $20,000 cleaning that place out and in five years, we'll be right back. And you know, I can't commit to because I'm not I'm not having people come up to take pictures of the lake. You know, I mean, I like the Lake is good for the fish, it puts oxygen in the water, you know, people fish love, they want all this stuff going on. So I'm going to respect her concerns about the beauty. But those water lilies have their purposes.

Dorrier: So any of the other Commissioners have any questions about this for Carl?

Gooden: How many people share that lake?

Burmaster: As Mr. Perkins said, Chad they own it's only a few property owners, but they own the majority of around the lake. The Perkins's is probably 60% Soltesz owns a little piece of it. I own a piece of it. And I'm not sure who owns a little piece on the upper end if somebody does, I don't know. But think it's like four people.

Gooden: So right now who is responsible for the ecology of the lake.

Burmaster: San Francisco Water Authority, she's here she takes a picture of the lake, Kelly here, I had her come out with her engineer showed him what I was proposing to do. Said no effect on the lake at all.

Gooden: So if you're not having Lake events

Burmaster: You can see the lake from where the event is going to be but it's not a lake go swimming, go boating go. Nothing like that.

Gooden: But that's what I'm asking.

Burmaster: With any of these events it's going to no lake access at all.

Allen: Think we should put in a time I'd say nothing past 10 o'clock at night.

Burmaster: If I need to change something, maybe if we put the stipulation in there if I had a special event or something, so I could come in and submit it to the board. And they can submit it to the landowners and if they agree to it, I can do it. Something like that?

Allen: Well noise ordinance is 11 o clock.

Burmaster: Im just trying to keep everybody happy.

Allen: You want to say eight o'clock? So

Dorrier: I'd say eight or nine.

Burmaster: Let's say nine.

Dorrier: So we'll add that to the conditions

Edmondston: So it will be a condition, no event to be held past 9pm.

Dorrier: Right. Burmaster you had asked about if that needs to be changed if there's any modification to these conditions…

Burmaster: Can I submit it to the Board? If I talked to my neighbors and see if they would agree.

Edmondston: That's not what they're placing in it right now you have no event past 9pm That is your condition that you are held to, if you need a modification from that that requires a brand new application.

Allen: Summertime it doesn't get dark till nine o clock.

Burmaster: I can't guarantee everyone will be gone by nine because I have to clean up and everything but I will say the music will be stopping. Believe me the band thing I think it scares people the big concert thing I don't think that's where were going to end up going, musicians you know it's a… I think it's more of a car shows more or just something to have people come hang out eat hot dogs do whatever and let the kids run around and have a good time I'm not trying to

hurt anybody I don't want to mess anybody's way life up you know I lived off Tower Hill Road in Buckingham for a very long time very peaceful. I've worked Susan's cows for many years worked at farm for many years love it there. I get it, I don't want to hurt anybody

Dorrier: Carl I did notice where you were looking for promoters up and down the East Coast and it bothered me a little bit because…

Burmaster: Not promoters.

Dorrier: Well event promotions and so what's going to happen when you have 5000 people show up I mean we're going to have a problem…

Burmaster: I'm not. if I ever get to that I'm going to have to do it's going to be invitation only so many tickets sold period and I don't ever think I'll reset number I really don't you know just in case I just don't think this will happen but you'd have to have a mighty big band and didn't have to be ticket only you could be coming for tickets.

Dorrier; So you will be in charge of that over in the 3500 is absolutely the top because you know how things turning into more and more down the line and you got a Woodstock on our hands that's what I mentioned in the meeting.

Burmaster: No were not going to have that.

Dorrier: Okay im just saying. any more comments?

Burmaster: Yes, sir. No more 3500 100%

Comments from Crowd

Dorrier: Well, that was my concern too. And Carl says he'll adhere to that so.

Comments from Crowd

Burmaster: Thank you I just spoke about the condition of the property I'll take care of my property okay. You worry about your property

Dorrier: Okay, I'll have to stop that. Thank you

Allen: I make a motion to approve with the added condition of nine o'clock stop at parties and moving on to board.

Gooden: Second.

Dorrier: I have a motion that we consider passing to the board of supervisors with one additional condition if that is okay, we'll have a vote on it now. All in favor of doing this passing it through for Carl to the Board of Supervisors please raise your hand 6 of six so passed. Thank you Carl. Next case.

Supervisor Allen moved, Commissioner Goodenr seconded, and was unanimously carried by the Commission to move 21-SUP287 on to Board of Supervisors with changes.

Edmondston: Yes, sir, the next case the public hearing would be for case 21 SUP294. This is Joseph Kaufman as we are aware Mr. Kaufman's notice for the public hearing in the Farmville Herald had an incorrect address with that incorrect advertisement. My request would be if it would be the pleasure of the planning commission to hold his public hearing after advertising correctly on January 24 2022. At 7pm.

Allen: So moved.

Gooden: Second.

Dorrier: I have a first and a second that we do this at our next that will be our next meeting, right. Okay. All in favor of doing this. Raise your right hand please. Approved. Next case.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to move 21-SUP294 on to public hearing for January 24th 2022 at 7PM.

Edmondston: Our next case is 21 SUP 295. This is Jennifer Sombar and Katie VanSkiver. This is tax map nine parcel 10A contains approximately 25.159 acres and it's located at 143 Hatton Ferry Road Scottsville. In the slate river magisterial district, it's currently zoned a one. The request before you is to obtain a special use permit for the purpose of operating an Airbnb Bed and Breakfast camp sites and Events Center. Of the Miss Sombar contacted zoning officer as a result of a conversation questioning the activities held Miss Sombar obtained an application to come in to compliance with the zoning ordinance. She was instructed to not hold events at this time pending the outcome of the special use permit application. She is working with the building inspector in an effort to bring certain structures into compliance with zoning and the building code. And it will be necessary to work with Virginia Department of Health regarding necessary permitting for the septic field and further approval for these structures. For this case, there are 14 conditions. Both of our applicants, Miss Sombar. Miss VanSkiver are here with us. They have contacted me by email to let me know of their agreement with the conditions currently. And

they're here to answer questions or concerns and we do not have anyone signed up for their public hearing, Mr. Chairman.

Dorrier: Okay. Would you all like to say anything about the permit that you I asked him about or tell us any more about it, we'd been through it I know at the first meeting, but just the let us let everybody in on let know. I'd like to say something first, that we have two new members tonight, and maybe a bad time, I should have said it before. And I'm sorry, I didn't JD Crews on the end. Well, I'd like to welcome him to our new commission for the Planning Commission. He lives in Buckingham County and his grandfather had been here for many, many years. And we welcome him tonight. Also, Stephen Taylor. He's from district seven, we'd like to welcome him. He's a resident of Buckingham County. And just thank you for taking the position and listen to what goes on and help us out if you can. And we really appreciate it. And JD, I didn't mention that you were from District Four. So thank you very much. Okay.

Katie VanSkiver: Thank you. So we had a dream to open an animal sanctuary. So we looked for a farm for 10 years, and we found a farm that was better than we could ever have dreamed of. This is a little slice of heaven. It was like that before we ever got there. So we've been there for about two and a half years. We do we have, we have a bunch of rescue animals. And after living there, we realize that this place is so special. And there's so much to it, that we really wanted to open this up to more people to enjoy the peace, the beauty, we're promoting kindness and compassion. So our idea was to start offering camping sites for RV and tent campers. There's also an existing building there that would be rented as an Airbnb. This, this sort of takes care of two things. It gives more people exposure to the farm, the rescue animals, the river, everything, but it also helps bring in revenue for our nonprofit, our animal sanctuary. So that's what we do. We've talked about potentially holding small events in the future, we have been approached by people who would like to have small weddings there. We haven't had anything yet. So that's kind of what we're thinking.

Dorrier: Right. Anybody have any, any commissioners have any questions? I'd like to say that I know this place personally. It is a small piece of heaven down there anywhere on the James River. But you have done wonderful job working with that. I guess we will close that and see if it's any more questions.

Jennifer Sombar: So with the considerations of the concessions that considerations that were sent forward, we did have one amendment request and it was around a commercial trash receptacle will certainly take care of the trash and provide trash receptacles for our guests. We prefer not to have an actual permanent commercial bin on the property. It sort of takes away from the aesthetics and just kind of the general sense of what we're trying to do. But we will take full responsibility for trash removal and it being done properly and within, you know, waste ordinances. So that was our only requested amendment.

Dorrier: Okay. Anybody else to speak? Close the public comment. Do I have a motion to pass this on?

Allen: So moved.

Gooden: Second.

Dorrier: All in favor raise your right hand. Five of five. So passed. Will move on to the Board of Supervisors. Thank you. Thank you. Next case.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to move 21-SUP295 on to Board of Supervisors.

Edmondston: Mr. Chairman, our next case is 21 SUP296. This is the Buckingham cattlemen Association. It's on tax map 122 parcel four lot three a it contains approximately five acres and it's located at 11851 West James Anderson highway Buckingham. In the Maysville magisterial district. It's currently zoned a one and the applicant wishes to continue the agricultural use has been as has been consistent with the current uses as approved in their permit 13 SUP217 and to promote increased agricultural use and agritourism use, the applicant is asking for a modification and amendment to the original approval to include striking conditions nine and 22 and amend condition 21. To state the facility shall be used for indoor meetings, conferences, receptions, sales trainings, and outdoor agritourism events such as but not limited to agricultural sales, shipping, bull riding, barrel racing roping, horse training, cattle handling and festivals. Below I have provided for you the amended conditions, the original conditions were turned in with the application and were introduced to you at the November 22. Meeting. Miss Ligon and along with Mr. Thomas to speak on behalf of Buckingham Cattlemen's Association. We do have an individual signed up for the public hearing and it's Mr. Thomas.

Dorrier: Open public hearing comment.

Alvin Thomas: I'll be very brief. My name is Alvin Thomas. I live at 1112 Thomas Road, Dillwyn, Virginia, I'm in district two. I'm a member of the Buckingham Cattlemen's Association and also the recording secretary for the association. I support the modifications and the amendments as requested for SUP 296. I think these modifications would increase the utilization of this multi-use facility and facilitate this would help benefit the county citizens and make this a more viable operation of this facility. This facility has been supported both monetarily and by documents by the county. And we have received a sizable amount of money in the past from the Virginia tobacco indemnification commission. And we've used these funds to build this facility and make this a multi-use facility for a lot of opportunities. And I think this is just the one more way to make this more available.

Dorrier: Thank you. Anybody have any question?

Allen: Did all people comment?

Edmondston: No more comment.

Dorrier: No further comments close the public comment.

Allen: Do I need to make a motion on each change or just…? To include all three changes right?

Edmondston: Yes, sir.

Allen: Okay. So I want to make a motion to approve it, send it to the board supervisors with the three changes of condition nine, twenty and twenty-two.

Crews: Ill second that.

Dorrier: Okay, it's been moved and seconded that we adopt this with the modifications to 9 20 and 22. All in favor of this to be passed to the Board of Supervisors please raise your right hand five of five its passed. Thank you. Next case.

Supervisor Allen moved, Commissioner Crews seconded, and was unanimously carried by the Commission to move 21-SUP296 on to Board of Supervisors.

Edmondston: The next case is 21 SUP297. This is George and Susan Pamela Goodwin. Property is at 263 Bill Meade Lane Scottsville Virginia 24590 tax map for parcel nine. This parcel contains approximately 102.3 acres. It is an A one agricultural zoning district and the applicants wish to obtain a special use permit for the purpose of operating an Airbnb Bed and Breakfast with campsite. Mr. and Miss Goodwin have submitted their application in your packet tonight you will see that 14 conditions have been suggested to you for consideration. We do have the applicants with us this evening. And we have no one signed up for the public hearing.

Dorrier: Hell Mr. Goodwin, how are you tonight? Would you like to say a few words?

George Goodwin: We're not like Katie we're not an animal sanctuary although we have my daughter's bees and cows and last horse still on the farm but now we're we have decided we'd like to modify the apartments and change the use to from an apartment to actually have the Airbnb type environment.

Dorrier: And you okay with the 14 stipulations Everything okay with you on that?

Goodwin: Yes, sir.

Dorrier: I think we, we know that you have a beautiful place also down there. So thank you.

Goodwin: Thank you. We try to keep it keep it right. And that end of the county proud and keep farming for us and keeping that part at least not over overgrown or anything.

Dorrier: Okay. Thank you, sir. close public comment. Any questions from the commissioners on this? If not, do I have a motion?

Allen: Make a motion that we move it on to the Board of Supervisors.

Gooden: Second.

Dorrier: Thank you. We have a motion and second to move to Board of Supervisors. All in favor Raise your right hand. Unanimous. Thank you very much.

Goodwin: Thank you for your time.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to move 21-SUP297 on to Board of Supervisors.

Edmondston: Our final case under old business this evening is case 21 SUP298. The landowner applicant is Ike Yoder. He's at 7041 Crump town road tax map 194 parcel 15. This parcel contains approximately 122.5 acres in the is in the Curdsville magisterial district. He is a one agricultural district has wishes to obtain a special use permit for the purpose of operating a sawmill. This case came to the attention of the zoning administrator by way of a complaint after investigation and a meeting with the landowner it was discovered that a large area of land had been disturbed and DEQ approval and permitting and erosion and sediment control land disturbance permit would be necessary. DEQ and county officials conducted a site visit on September 24 2021. And the communication is included in this packet. Mr. Yoder has contacted a civil engineer and is working to mitigate these issues immediately. We've had follow up with Lyn Hill who is our ENS officer and zoning enforcement officer and the necessary measures have been taken to mitigate any problems that have were initially caused by the excavation on site. Mr. Yoder is here with us and as the packet states he wishes to stay in compliance with all federal state and local permitting. He's here this evening to address questions or concerns and I believe he has his engineer with him as well.

Dorrier: Thank you, Mr. Yoder. Nice to have you. Would you like to tell us a little more what's happening with this project?

Ike Yoder: Well I'd like to have my business at home. We don't have vehicles. Have family there. Now we've received some negative feedback on it. You know, I just hope we could keep everybody happy. I dont have a whole lot to say about it.

Dorrier: Is the sawmill in compliance of what we what we're seeking from you? And you okay with the 10 stipulations that we've, we've presented to you?

Yoder: Yes sir.

Edmondston: Mr. Chairman, as far as compliance, Mr. Yoder is working with this engineer and DEQ and the county for mitigation for the excavation at the driveway entrance, but there is not a sawmill that has been constructed on this property as of yet. I don't want you to think that he's not operating one on property or due to a compliance issue because there is no sawmill on this property right now.

Dorrier: There was no sawmill I thought that's what you were saying you operate in a sawmill so

Yoder: I hope to in the future if I can.

Dorrier: Your working with VDOT also?

Yoder: VDOT approved the entrance.

Dorrier: Okay. They have approved okay.

Edmondston: We do have a voicemail four emails and three individuals signed up to speak regarding this Mr. Chairman.

Dorrier: Open, open public comment.

Edmondston: Start with the voicemail.

Allen Todd: Hi my name is Allen Todd im in district three I live right up the road from the proposed saw mill on route 609 in Buckingham coming up for public comment. I am opposed to this sawmill. I do not want 15 to 20 logging trucks on that dangerous road every day. I have property right near there. And I'm opposed to the sawmill on route 609. Thank you my phone number is 804-873-7035 Thank you.

Edmondston: Our first email begins I am writing in regards to the proposed sawmill on Crump town road 609. As a resident whose house and business is located on Crump Town Road, I'd like to point out the most obvious safety concern of this proposal is that being Crump town road is in no way able to safely accommodate the proposed amount of heavy semi-truck traffic. It is a narrow unmarked, no yellow center lines or white shoulder lines. hilly curvy road that more resembles a mountain road in many stretches. One stretch requires you to get one side of your vehicle off the road to accommodate even a noncommercial vehicle. Just a month ago, I was only going 35 When I met an oncoming fully loaded logging truck and a blind curve completely in my lane. had not been traveling slowly I would not have had time to get my vehicle completely off the road. This road already has weeks of heavy semi traffic of bio solid trucks logging trucks VDOT repair trucks. The second bridge over the mathematics going to 460 located in Prince Edward County is a single lane bridge that is leaning significantly to one side and at the bottom of a steep hill. Vdot has repaired it multiple times already. I can't believe it could accommodate

more semi traffic in good conscience anyone voting on this should drive Crump town road from Francisco to 460 several times. Imagine meeting several oncoming semis not in their lane, and then you will have an educated opinion as to how to vote on this. In my opinion. This obviously commercial operation meant for roads like for 60 or 15 should not be located in an agriculturally zoned area. Even beyond the considerations of noise, pollution and lower property values. The infrastructure is simply not there. The safety of the residents will be compromised. Thank you for your time and happy holidays. Lindsay Constable Crump town road resident. Dear Buckingham County administrators I would like to comment on the proposed sawmill on Crump town road. I live on Crump town road and generally enjoy the tranquility of a rural residents. The proposed sawmill according to Mr. Yoder will put an average of 15 to 20 vehicles a day on Crump town road. Mr. Yoder further estimates that this number will increase, the logging trucks will erode the tranquility of my residents. The logging trucks will pass by my house on Crump town road constantly, roughly two to three an hour. With noise levels characteristic of the of these heavy duty trucks, the physical road will take a beating as well. Historically logging trucks result in proportionally more accidents as compared to large trucks as a group. The mean age of logging trucks is roughly 13 years old, versus all trucks at nine years old. These two fact points eventually point eventually to more accidents on Crump town road with more serious injury or fatalities. Please deny this request for a special use permit as proposed. Thank you Michael Beasley 4715 Crump town road. Dear commissioners, I am Jonathan Dick and my wife and I own and reside at 6072 Crump town road in the Curdsville district. I would like to go on record as opposing the reference case requesting a variance in the zoning to allow a commercial manufacturing sawmill Crump town road for the following reasons. Zoning is for the purpose of plant growth, not anti-growth. Zoning allows the citizens wanting to locate in a particular area to understand the allowed activities in an area. Allowing this request to proceed violates the rights of those that move into this a one zoned area. The existing residents such as myself do not have an option to move away from the traffic and noise the sawmill will create. Mr. Yoder has an existing business and this request benefits him and his partners only not the residents of Crump town in the surrounding area. There are special needs children that live on this road. In addition, there are several elderly over 80 years that are still driving that also live on the Crump town road. This additional large truck traffic on the secondary road will cause a safety issue for all that reside here. In addition, Mr. Yoder and associates have made clear that they wish to expand the sawmill if approved. Mr. Yoder has not operated transparently and in good faith regarding his intentions has been and has been demonstrated by his lack of requesting permits environmental damage to the creek and abiding by the guidelines regarding the signage for this hearing. I find it extremely hard to believe that an existing business owner for over six years as Mr. Yoder states in his request that Mr. Yoder will be unaware of the need to notify the county and obtain permits for such an operation. One can only speculate whether this behavior would continue if this request for SGP was approved. Again, this request if approved would not benefit anyone other than Mr. Yoder and Associates and would be a hardship and financial loss and property values to the surrounding neighbors. For most folks, their property is their largest asset and this would rob us of the value along with the peace and safety of the A one zoned area we moved into. There is no benefit or upside to the residents on Crump town road. I respectfully request that you decline this onside request. Sincerely, Jonathan dick 6072 Crump town road. Good evening. Tonight I would like to express my concerns with the request for a special use permit for the purpose of

operating a sawmill by the applicant in case 21 SUP298 I quote are my concerns are as follows road while state rail 636 Francisco road is identified as a major collector by VDOT it still lacks many needed improvements that address various side issues, driveways ride on road curves twist which cause blind spots, hills Road width, lack of centerline intersections etc. Many of these geometric deficiencies make general traffic tricky on any day, especially if the traffic is not familiar with the road. Because the volume of residential collector traffic has already great the addition of increased logging traffic will only exasperate the impact of such deficiencies. In addition, Crump town road is a secondary road and is unable to handle such type of traffic as well. lacks turn lane for big trucks, both egress and ingress center lane center line narrowed etcetera zoning and comprehensive plan. According to the Buckingham County comprehensive plan, the county has identified numerous goals, objectives and strategies for the future development of Buckingham to achieve its vision. In addition, the county determined various priorities. Several of these priorities include the following encourage development within designated village centers, which this is not evaluate rezoning and conditional use permit applications to ensure consistency with the comprehensive plan and compatibility with the existing and planned land use. This specifically relates to this case as the area is not zoned for this type of business. As a reminder, the zoning ordinance creates the land use regulations that encourage the realization and implementation of the comp plan. The proposed site for the sawmill is currently zoned agriculture that has been identified by the county to be compatible for various permitted uses which an operating a sawmill is not. It does concern me whenever a special use permit is approved because it only means a variance has been allowed in an area where otherwise the county and its citizens have previously determined its desired usage to maintain the overall vision for the county by way of County Citizen participation and adoption of the comp plan. In closing, I encourage each of you on the planning commission to give great thought on your decision tonight on this special use permit request. The role of the Planning Commission as the name implies is to plan you can each can assist in helping determine help the county, our county its communities manage changes in growth and development. Therefore, based on my concerns previously noted I respectfully request that the special use permit for the purpose of operating a sawmill at 7041 Crump town road Farmville, Virginia Curdsville magisterial district not be recommended to the Board of Supervisors. Thank you Mary S. Hickman. 11916 Francisco road district three Curdsville, a new store precinct. Mr. Chairman, we have three individuals signed up to speak the first will be Rita Dick followed by Al Buzcek And then Josh Amos.

Rita Dick: Rita Dick and I am one of the neighbors that lives. We moved there and we bought our farm in 2005. And it's been a life dream to have a farm. My grandparents were dairy farmers, my husband worked very hard with ups. He's finally retired. We have three children, grandchildren, we moved out here to Buckingham as of the peace because of the rural because of the farm. And we could have purchased somewhere else. But we wanted to be in that type of a areas zoned area for agriculture and farms. I'm a horse woman, we have cattle, I had sheep, we have goats, we have chickens. You know, the area we live in is the farm rural setting. I respect wanting to have a business at home, you have a business running somewhere already. If you wanted to move your family and have your home, why did you not purchase land already in that designated area and move your family there? Obviously you don't want to live in an industrial

area either. None of us want to live in an industrial neighborhood. And that is what they're asking of us. So it's going to impact us. It's not just his family in his life is going to impact all of us on that road. I'm asking you please, please don't pass this. He has a right to have business. He can move his family to that industrial piece of land that's already designated. And that's what I'm asking tonight. Thank you.

Edmondston: Al Buzcek.

Al Buzcek: My name is Al Buzcek. I live just off of Crump town road. I live at the junction of Paradise Road. And I'm kind of surprised in some ways. I feel like I'm probably the only positive person considering this. We had recently 200 acres cleared of logs. I leaned over and asked my wife. Do you remember when that was and she says she doesn't? That was a lot of log trucks coming out of there. Yes, it didn't register in our minds that that was a terrible thing. I'm restore have restored many buildings. We used to have moss brothers had a sawmill. I've been here since 1980. The moss brothers had a logging operation not far from where we're at. I guess I just don't see that that we can't accommodate someone trying to provide for our family. One of the one of the greatest things about Buckingham is the take care of the roads. I'm very grateful for that. We just had a brand new bridge put on Paradise Road they widened it and they did within a week of when they told us they would do it. I think they're very capable of taking care of the roads and travel that road. Many times going back into Buckingham courthouse restored our house and Glenmore. The only one only problem I've had on that roads was on a pickup truck. It wasn't a big usually you can see the trucks coming in accordingly. So I know I know I'm maybe the only positive one out of this whole thing. It's just a lot of negativism and yet. I think it's something that we should consider that as you know even on our plaque we have logs up there we are a very accommodating people and I hate to be the only wart in the fabric of things but I live on that road and someone comes in wants to provide another service at least for us. People that work with wood come in like to see that so that's all I have to say. Thank you for allowing me to speak

Edmondston: Josh Amos

Josh Amos: How're you doing? I'm Josh Amos song 317 acres at the corner of New Store and Buckingham Springs as the crow flies at 300 feet from my land to where he wants to put sawmill I'm for because I'm in the timber business, own logging crews and pretty much that's all we have and Buckingham Charlotte Luneburg, Mecklenburg County is logging. So I'm all for any solid meal or anything to do with similar business. We cut a bunch timber in that area, never had any accidents. At one time I had 36 tractor trailers on the road alone got a pile of timber out of Buckingham County. I've never had an accident in Buckingham County pile of accidents but not in Buckingham County. But I understand these people want to be in the quiet and all of that stuff. But timberland is agricultural. I mean, it's farming or farming trees that's just a way of life can't change it. Just because people won't quite cut trees and people's houses get cussed out screamed that they can't change. I pay for trees; I'm cutting the trees. But at the same time, everybody's upset about the road. And it is a tight little row. If any, I've got a haul logs to his soul, millions now in Charlotte County. I know why he wants to move Buckingham, because it's a pain in the butt for them to get 10 guys to Charlotte County every day to go to work. But none of my trucks

would be directed to go down Crump town road other than a mile and a mile and 1/10 It's going to be from Francisco road to his driveway. And I mean, that would be the smartest thing is everybody go that direction because Crump town road is a kind of a rough road and stuff. But truck drivers are a whole different breed of people also say I can't promise that would always be the case. But that would be as I was, I would direct my people. Also, there's already a commercial business on Crump town Road, six tenths of a mile from where he wants to build a sawmill 20 30 trucks they leave at commercial business every day. Nobody complains about it. The man who owns that commercial business is not complaining about this or he's for this. And I just I'm I understand why they're griping. But I think it should go through just because I know whatever would take to please everybody that man would do so. But that's just what I have to say about it. Thank you.

Dorrier: Thank you very much.

Edmondston: I don't have any others signed up to speak for the public hearing.

Dorrier: Okay, close public comment. Mr. Yoder.

Yoder: Yes, sir. Chip has a couple things would like to point out on his plans

Edmondston: We don't have the capability to have presentations this evening. Fortunately, all the screens but that's perfect. sure

Chip Coleman: Just to point out everybody can see it. This is the the piece of property. Basically, here's Crump town road here. He's going to put his facility back more along the northern boundary. But the northern boundary is Kyanite large timber tract. proposing to put it about 350 feet, the closest building be 350 feet from that property. The rest of the buildings will be 1000 feet from the road 1000 feet or more probably or more from this southern boundary and 1000 feet to the east from the western boundary. I think Mr. Yoder has done a good job of correcting his issue. Called in I say called in because I truly believe he didn't do it on purpose. I met with him and Mr. Hill, Lyn Hill out there and we went over several different options on how to make corrective actions. I think he was pretty quick on making those corrective actions. I think DEQ has already been backed out as of the 15th, and was pleased with the progress you've made on that. He has since seeded the whole the open area. Now, just so you know, all this gray area would be potential lay down area, log area, but it's not there now. Basically right now he's cleared it. And he's reseeded he's drilled most of it you want a larger picture of what's going to happen. That's generally how his trucks will come in, stores raw material on the back, put it through the mill, they will come back and put his product in the front, and then they'll load it. Anything else you wanted me to mention? I can leave this here. If it helps you visualize it.

Allen: Does DEQ have it in writing somewhere that we can see that they approved everything.

Yoder: I did not receive the report.

Edmondston: I have not either I know that visual observations with the DEQ vector and the county inspector. It met the level for DEQ. So we'd be waiting there. We don't have that report yet.

Comments from Crowd

Allen: But me to me, if a DEQ is not happy with it, it's not right for me to push it forward. Right? Am I thinking right? In my paperwork i don't have the VDOT entrance. Its blank.

Edmondston: He got entrance should be a copy of where he received from, I can't remember who signed off on the VDOT form. And it should be here in the packet where it has. He has a permit with them. It's not a permit for the commercial construction. It's a permit to come into compliance with v dot, which was something that stemmed from this activity. So if it's, I thought it was in with the DEQ paperwork, but I can verify that and make sure it's put back into this packet. Mr. Allen?

Allen: Well, I just got the blank one. Not a completed one. Maybe somewhere else I missed it.

Dorrier: Any other concerns? We need to ask Mr. Yoder?

Gooden: Im concerned about the traffic on the roads. And I really don't know about logging trucks. Mr. Allen did have that concern with a previous applicant. and I think it's something the board needs to look at what roads that we're going to allow logging trucks on, how we're going to allow logging and trucks in areas. So yeah, so I need more information.

Allen: The only problem with that is yes, there are some roads that you probably don't want them on. But as far as the state's concerned the state will not stop any trucks, any vehicles from any road. You know, unless you got a bridge that's too small to carry out other than that, it's legal for any vehicle to go on. But I know what you're saying and I get why I could same issue over in my area.

Gooden: Right. Just as I'm saying I don't know about the amount of logging trucks that are going in there.

Allen: 15 to 20 a day and they're counting on increasing that.

Dorrier: Anyone have any issues, any comments? I'm a little reluctant myself. I know all these trucks on the road and we just had this issue come up. A lot of controversy over it I think we either need more information or we need to do something else? Before we pass this?

Gooden: Yeah we need VDOT and DEQ put in our packets.

Dorrier: Okay, is that possible? Nicci?

Allen: We could put this on hold until next month.

Gooden: So is there a continuation.

Edmondston: So you've closed the public hearing so that you won't have to hold the public hearing. And what you want is more feedback from VDOT regarding the stage that Mr. Yoder is currently at and I'll ask DEQ for their formal report. They have not completed that. They're specialists regarding the streams and creeks. Kara Witt was well pleased. This is a verbal conversation Lyn Hill and I had after that site visit, but we have not received that formal plan, but I'm happy to follow up with those that are working this particular case.

Dorrier: Will anyone be commenting on safety issues that was brought up?

Edmondston: As far as the traffic?

Dorrier: Traffic? Yeah, traffic issues VDOT would handle.

Edmondston: We could ask Scott Frederick, from vdot come in to speak to the roadways, the volume of traffic, the types of trucks that currently use the primary and secondary roads here in the county. Did you want anyone else regarding safety? You know, law enforcement, state police sheriff's office to address that? Okay, anybody?

Dorrier: I'll take anybody you got really, I really think we need more information.

Gooden: VDOT would be good.

Dorrier: I hear a lot of comments from the public. And it's just a problem. And we want to, you know, we just hear the servants, we don't, we don't know how it would be a year down the road where it'd be 40 trucks coming in and out. So we'll move this on, we'll put it on hold until our next meeting, and go from there.

Comment from crowd

Dorrier: Yeah, I don't really think we have no to traffic data is going to come from what his output is. And it's going to be traffic in and out from the sawmill. And I think that's what the problem will be for the public. For what's coming and going. The noise, the noise, you know, like I say it I'll take any information on I can get on it.

Comments from Crowd

Gooden: I think like I said, I think data report from data is more that we need about what the traffic is and the condition of the roads. And the DEQ report that we need to be officially put in our packet. So if you have something that you think may be a value, you can pass that on to Nicci she'll put it on our packet.

Comments from Crowd

Edmondston: I don't I don't know that we will have it before the January 24 meeting but I'll receive some type of communication from that DEQ department. I can put with the file.

Dorrier: Okay. Thank you very much. New business.

Edmondston: Yes, sir. Mr. Chairman, members of the planning commission, I have submitted the planning commission, work session dates and regular meeting dates for the year 2022. As you can see, our next meeting would be January 24 2022. As a regular meeting on that fourth Monday. I've submitted this to move to approve.

Allen: So moved.

Gooden: Second.

Dorrier: So moved in second to for the planning commission calendar for 2022. All in favor, please raise your right hand five of five. So reports.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to hold 21-SUP298 for more information.

Edmondston: Mr. Chairman, in your packet tonight you have the building permits report. I have nothing further under zoning administrator this evening.

Dorrier: Commission matters and Concerns executive closed session

Allen: I make a motion they will go into closed session § 2.2-3711.A. 5 Discussion concerning a prospective business or industry or the expansion of an existing business or industry where no previous announcement has been made of the business' or industry's interest in locating or expanding its facilities in the community. § 2.2-3711.A.7 Consultation with legal counsel and briefings by staff members or consultants pertaining to actual or probable litigation, where such consultation or briefing in open meeting would adversely affect the negotiating or litigating posture of the public body.

Gooden: Second.

Dorrier: Okay. All in favor of closed session raise your right hand approved we're in closed session thank you.

Supervisor Allen moved, Commissioner Gooden seconded, and was unanimously carried by the Commission to go into closed session.

Gooden: I move that to the best of each Board member's knowledge only business matters related to the codes of which the executive meeting was convened was discussed or considered in the closed executive session.

Allen: Second.

Dorrier: So moved and second. All in favor raise your right hand. Approved. Adjourned.

Commissioner Gooden moved, Supervisor Allen seconded, and was unanimously carried by the Commission to return from closed session and adjourn the meeting.

There being no further business, Chairman Bowe declared the meeting adjourned.

ATTEST:

Nicci Edmondston Zoning Administrator	Patrick Bowe Chairman

Buckingham County Planning Commission
January 24, 2022
Administration Building
7:00 PM
Public Hearing Case 21-ZTASUP294

Owner/Applicant: Landowner Joseph S. Kauffman
2968 Buckingham Springs Road
Dillwyn, VA 23936

Applicant Joseph S. Kauffman
2968 Buckingham Springs Road
Dillwyn, VA 23936

Property Information: Tax Map 188 Parcel 1 Lot 3, Rainey Acres Subdivision, located 2968 Buckingham Springs Road Dillwyn, VA 23936, State Route 635, Curdsville Magisterial District.

Zoning District: Agricultural District (A-1)

Request: The Applicant wishes to Add a Zoning Text Amendment for Construction, Manufacturing, and Retail Sales of such Structures to include Sheds, Small Garages, and other Utility Buildings and Obtain a Special Use Permit for that Purpose.

Background/Zoning Information: This property is located at 2968 Buckingham Springs Road Dillwyn, VA 23936. This property is currently zoned Agricultural A1, the landowner and applicant is Joseph S. Kauffman. Mr. Kauffman seeks to be able to operate a business to include, but not limited to, wholesale manufacturing of storage sheds. Business plans are included in the narrative submitted by Mr. Kauffman. Please note that a completed VDOT Traffic Impact Determination Study has not been submitted by Mr. Kauffman. Mr. Kauffman is required by VDOT to submit an engineered commercial entrance plan in accordance with current VDOT standards for his proposed use to include verification by a professional engineer of the necessary minimum sight distance requirements for such an application. The Zoning Administrator received calls regarding the land clearing on this property and the Zoning Enforcement Officer was sent to make a determination. At this time, Mr. Kauffman explained that the clearing was for an agricultural project which may include building a barn for future use. Again, a zoning complaint was called in and after another visit by the Zoning Enforcement Officer, Mr. Kauffman explained that he would be proceeding with a Rezoning Application to operate a business to manufacture sheds and related items, and not an agricultural barn project. This area is zoned A1 with many residences neighboring the subject property, and is part of the Rainey Acres Subdivision. Mr. Kauffman's case was introduced on October 25, 2021, but due to issues with setbacks, his request for a zoning map amendment was amended to a zoning text amendment and special use permit application.

Below are conditions that you may consider attaching to the request if approved:

1. That all federal, state and local regulations, ordinances and laws be strictly adhered to.

2. Right of ways and roadway shoulders shall not be used for parking.

3. The property shall be kept neat and orderly.

4. That the applicant pursues a commercial solid waste container and follow the County Solid Waste Ordinance.

5. That all documentation submitted by the applicant in support of this special use permit request becomes a part of the conditions except that any such documentation that may be inconsistent with these enumerated conditions shall be superseded by these conditions.

6. Nothing in this approval shall be deemed to obligate the County to acquire any interest in property, to construct, maintain or operate any facility or to grant any permits or approvals except as may be directly related hereto.

7. The County Zoning Administrator and one other County staff member, as appointed by the County Administrator, shall be allowed to enter the property, with proper notice, if a complaint is registered against the property for noncompliance with this permit. Any complaints not solely related to this permit will be given to the appropriate department or agency.

8. In the event that any one or more of the conditions is declared void for any reason whatever, such decision shall not affect the remaining portion of the permit, which shall remain in full force and effect, and for this purpose, the provisions of this are hereby declared to be severable

9. That any infraction of the above mentioned conditions could lead to a stop order and discontinuation of the special use permit, if it be the wishes of the Board of Supervisors.

10. That the applicant(s) and landowner(s) understands the conditions and agrees to the conditions.

APPLICATION FOR A SPECIAL USE PERMIT

CASE NUMBER: _____
(Case Number Assigned by Zoning Administrator)

DATE OF APPLICATION: _____

Special Use Permit Request: Light Industrial - Wholesale Manufacturing - Home Base Buisness (Not a home Base Buisness)

Purpose of Special Use Permit: Change Portian of Property From Agriculture To Light Industrial

Zoning District: _____ Number of Acres: _____

Tax Map Section: 188- Parcel: 1 Lot: 3 Subdivision: _____ Magisterial Dist.: _____

Street Address: 2968 Buckingham Springs Rd. Dillwyn VA. 23936
Directions from the County Administration Building to the Proposed Site: Rt 15 South Right on Old Curdsville Rd Bare Left on To Buckingham springs Rd. for 1.25 miles property on Left.

Name of Applicant: Joseph S. Kauffman
Mailing Address:
2968 Buckingham Springs Rd. Dillwyn VA. 23936

Daytime Phone: 717-529-2395 #1 Cell Phone: _____

Email: Kauffmanwoodworks@sle - email Fax: _____

Name of Property Owner: Joseph S. Kauffman
Mailing Address:
2968 Buckingham Springs Rd. Dillwyn VA. 23936

Daytime Phone: 717-529-2395 #1 Cell Phone: _____

Email: Kauffmanwoodworks@sle.email Fax: _____

Signature of Owner: Joseph S Kauffman **Date:** 8-18-21

Signature of Applicant: Joseph S Kauffman **Date:** 8-18-21

Please indicate to whom correspondence should be sent:
✓ Owner of Property ___Contractor Purchaser / Lessee ___Authorized Agent ___Engineer
___Applicant

ADJACENT PROPERTY OWNER'S LIST

(Required)

The applicant shall provide a list of all adjoining landowners, including subject property and all property immediately across the street/road from the subject property. Any body of water does not constitute a boundary line for this purpose, therefore a body of water and the property adjoining the subject property but separated by a body of water is still considered an adjoining landowner. County boundary lines and those adjoining property owners in the next County are considered adjoining property owners if the land adjoins the subject's property. Adjoining landowners can be verified through the Buckingham County Clerk of Courts or the Clerk's Office in the adjoining County, or by personal contact. The list shall include the name, address, town/city, zip code, road route number, tax map section number, parcel number, lot number, and subdivision. The list shall be typewritten or printed legibly. Failure to list all adjoining landowners could delay the process.

1. Name: Judy Morris

Mailing Address: 2904 Buckingham Springs Rd. Dillwyn VA 23936

Physical Address: Same

Tax Map Section: 188 Parcel: 1 Lot: 4 Subdivision: _____

2. Name: Cyril Folz JR.

Mailing Address: 3010 Buckingham Springs Rd. Dillwyn VA 23936

Physical Address: Same

Tax Map Section: 188 Parcel: 1 Lot: 2-A Subdivision: _____

3. Name: David and Sarah Hill

Mailing Address: 3044 Buckingham Springs Rd. Dillwyn VA 23936

Physical Address: Same

Tax Map Section: 188 Parcel: 1 Lot: 1-A Subdivision: _____

4. Name: David and Sarah Hill

Mailing Address: 3044 Buckingham Springs Rd. Dillwyn VA 23936

Physical Address: Same

Tax Map Section: 188 Parcel: 1 Lot: 1 Subdivision: _____

6. Name: Phillip Fnenaux

Mailing Address: 3276 Buckingham Springs Rd - Dillwyn VA 23936

Physical Address: Same

Tax Map Section: 188 Parcel: 45 Lot: D Subdivision: _____

7. Name: _____

Mailing Address: _____

Physical Address: _____

Tax Map Section: _____ Parcel: _____ Lot: _____ Subdivision: _____

8. Name: _____

Mailing Address: _____

Physical Address: _____

Tax Map Section: _____ Parcel: _____ Lot: _____ Subdivision: _____

9. Name: _____

Mailing Address: _____

Physical Address: _____

Tax Map Section: _____ Parcel: _____ Lot: _____ Subdivision: _____

10. Name: _____

Mailing Address: _____

Physical Address: _____

Tax Map Section: _____ Parcel: _____ Lot: _____ Subdivision: _____

11. Name: _____

Mailing Address: _____

Physical Address: _____

Tax Map Section: _____ Parcel: _____ Lot: _____ Subdivision: _____

ADJACENT PROPERTY OWNERS AFFIDAVIT

STATE OF VIRGINIA
COUNTY OF BUCKINGHAM

This 29 day of September, year 2021,

I Joseph S. Kauffman hereby make oath that
(printed name of owner/contract purchaser/authorized agent)

the list of adjoining landowners is a true and accurate list as submitted with my application.

Signed: (to be signed in front of notary public)

Joseph S Kauffman
(owner / contract purchaser / authorized agent – please circle one)

NOTARY:
COMMONWEALTH OF VIRGINIA

COUNTY OF Buckingham

STATE OF VA.

Subscribed and sworn to me on the 29th day of Sept,

of the year 2021. My Commission expires on 6/30/24.

Notary Public Signature: Barbara I. G. Kragh
Stamp:

BARBARA I. G. KRAGH
NOTARY PUBLIC
REG. #110299
MY COMMISSION EXPIRES
6/30/24
COMMONWEALTH OF VIRGINIA

INTEREST DISCLOSURE AFFIDAVIT

STATE OF VIRGINIA
COUNTY OF BUCKINGHAM, VIRGINIA

On this 29 day of September, of the year 2021,

I Joseph S. Kauffman (printed name of owner) hereby make oath that no member of the Buckingham County Board of Supervisors nor the Buckingham County Planning Commission has interest in such property either individually, or by ownership of stock in a corporation owning such land, or by partnership, or as a holder of ten percent (10%) or more of the outstanding shares of stock in or as a director or officer of any corporation owning such land, directly or indirectly by such members of his/her immediate household, except as follows:

Signature of Owner: (to be signed in front of notary public)

Joseph S Kauffman

NOTARY PUBLIC
COUNTY OF Buckingham STATE OF Va.

Subscribed and sworn to me on this 29th day of Sept.,

of the year 2021. My commission expires 6/30/24.

Notary Public Signature: Barbara I. G. Kragh
Stamp:

BARBARA I. G. KRAGH
NOTARY PUBLIC
REG. #1102979
MY COMMISSION EXPIRES
6/30/24
COMMONWEALTH OF VIRGINIA

CULTURAL RESOURCE ASSESSMENT AND RECORD CHECK FOR PENDING DEVELOPMENT APPLICATIONS

Case Number / File Name: _____

Visual Inspection Findings (describe what is on the property now):

The Property is currently a farm. I want To ~~O~~change several Acres Along the Road To Light Industrial To Built Sheds To Be Deliverd From Property Wholesale Not Retail Sales.

County Records Check (describe the history of this property):

Historically the Property has been used for a small 23 acre Farm. The Previous Ouner (C Ryan) had the Property Divided into 2 Parcels for Tax Purposes only.

Were any historical sites or gravesites found on site, or be suspected by a reasonable person to be on the site? Yes _____ No ✓

If yes, please explain and show on the site plan the location of such and explain any historical significance:

None Known

Will this proposal have any impact on the historical site or gravesite? Yes ____ No ✓

If yes, please explain any impact:

None Known

Owner/Applicant Signature Joseph S Kauffman Date: 8-18-21

Printed Name: Joseph S. Kauffman Title: Owner

APPLICATION FOR A TRAFFIC IMPACT DETERMINATION

Please fill out the following information before presenting to VDOT:

Case Number / File Name: _____

Applicant: Joseph S. Kauffman

Location: 2968 Buckingham Springs Rd. Dillwyn VA 23936

Proposed Use: Light Industrial

For VDOT use only:

_____ A Traffic Impact Statement is required per 24 VAC 30-155-60.

_____ A Traffic Impact Statement is not required. The traffic generated by the proposed zoning change / development does not exceed normal thresholds.

_____ The Traffic Impact Analysis has been waived by the Zoning / Planning Department for the following reasons:

_____

_____

Does the existing entrance meet VDOT requirements for the proposed use?
Yes _____ No _____ If no, please explain the necessary steps to bring into compliance with the requirements for the proposed use:

_____

_____

_____

_____

_____

Signature of VDOT Resident Engineer: _____

Printed Name: _____ Date: _____

SPECIAL POWER OF ATTORNEY AFFIDAVIT

STATE OF VIRGINIA
COUNTY OF BUCKINGHAM

On this _____ day of _____, in the year of _____,

I _____ the owner of _____
(printed name of landowner) (Tax Map Number)

Hereby make, constitute, and appoint _____
(printed name)

my true and lawful attorney-in-fact, and in my name, place, and stead give unto him/her said full power and authority to do and perform all acts and make all representation necessary, without limitation whatsoever, to make application for said zoning. The right, powers, and authority of said attorney-in-fact herein granted shall commence and be in full force and effect on the day _____ of the month _____ in the year of _____ and shall remain in full force and effect thereafter until actual notice by certified mail with return receipt requested is received by the Zoning / Planning Office of Buckingham County stating that the terms of this power have been revoked or modified.

Signature of Landowner (to be signed in front of Notary Public):

_____

NOTARY PUBLIC
County of _____ State of _____

Subscribed and sworn before me on the _____ day of _____

in the year _____. My commission expires _____.

Signature of Notary Public: _____
Stamp:

WRITTEN NARRATIVE

The Written Narrative shall describe the relationship of the proposed project to the relevant components of the Comprehensive Plan. Please be very detailed and describe in depth each and every component 1 through 15. The following outline is provided to aid you in preparing the written narrative:

1. Land Use
2. Community Design
3. Cultural Resources
4. Economic Development
5. Environment
6. Fire and Rescue, Law Enforcement
7. Housing
8. Libraries
9. Parks and Open Spaces
10. Potable Water
11. Sewage
12. Schools
13. Telecommunications
14. Transportation
15. Solid Waste

If this proposal is for an event, describe the handling of the entire event, including but not limited to: number of participants, schedule of events, police, security, food, beverages, water, sanitation, emergencies, crowd control, entrances and exits, traffic control, signage, advertisement, parking, fee collection, control of animals, trash disposal, site clean-up, fighting, alcohol, abuse of alcohol and/or illegal substances

SIGNAGE AT PROPERTY

The Buckingham County Zoning Ordinance requires the following:

The applicant in any case which requires a public hearing shall post signs furnished by the agent on each parcel involved at least 21 days prior to the public hearing indicating that a public hearing is eminent, the date, a rezoning issue, and a County contact number. The signs shall be placed on the VDOT right-of-way closest to the applicant's property line and shall be clearly visible from the road with bottom of the sign not less than one and one half feet above the ground. If more than one public road abuts the property, the signs shall be placed in the same manner as above for each abutting road. If no road abuts a property, then the agent shall define an area for the signs. The agent may ask the applicant that the sign be moved to another area either on the property to achieve greater public visibility. The applicant shall be responsible for keeping the signs free from grass, weeds, and any other plants or vines that may obstruct the public's view. The applicant shall contact the Virginia Department of Transportation for any information concerning where the right-of-way is located. The applicant shall be responsible for the signs should VDOT or their contractor conduct mowing or clearing of the right-of-way in the area where the sign is located.

Any signs required shall be maintained at all times by the applicant up to the time of the final public hearing. No person, except the applicant or the agent or an authorized agent of either, shall remove or tamper with any sign furnished during the period it is required to be maintained under this section. All signs erected under this ordinance shall be removed by the applicant within 15 days following a decision at the final public hearing and shall be returned to the agent. The applicant shall purchase the signs at a fee as determined by the Board of Supervisors and shall be non-refundable. The applicant shall be responsible for the replacement of the sign(s) and shall contact the agent as soon as possible for another sign to be replaced as the manner described above. Should the sign(s) have to be replaced more than twice, this section shall no longer be forced upon the applicant.

I have read, understand and agree to the above requirements.

Applicant/Owner: Joseph A Kuhn

Date: 10-1-21

TENTATIVE SCHEDULE FOR A SPECIAL USE PERMIT

The application, site plan, written narrative, and all information requested in this application must be filled out in its entirety and supplied to the Buckingham Zoning / Planning Office and the fee must be paid before this case will be allowed to move forward.

Case will be introduced at a regularly scheduled Planning Commission meeting held on the fourth Monday of every month. Planning Commission may set a Public Hearing at this time to be held during a regularly scheduled meeting. Public Hearings offer an opportunity for citizens to speak concerning the case.

Following the Planning Commission Public Hearing, the Planning Commission may make a recommendation to approve / deny / or table the case for more information. Once the Planning Commission makes a recommendation to approve or deny, this recommendation will be forwarded to the Board of Supervisors at their next regularly scheduled meeting. The Board of Supervisors meetings are held on the second Monday of every month. The Board of Supervisors may set a Public Hearing at this time to be held during a regularly scheduled meeting. The Board of Supervisors will make the final decision to approve or deny the application after the public hearing.

Example Timeline:

January 25	Case is introduced to Planning Commission. Planning Commission sets Public Hearing for next regularly scheduled meeting on February 22.
February 22	Planning Commission Public Hearing. Planning Commission recommends to approve / deny / or table for more information. Once the Planning Commission reaches a decision to approve or deny, this recommendation will be forwarded to the Board of Supervisors at their next regularly scheduled meeting.
March 8	Case is introduced to Board of Supervisors.
April 12	Board of Supervisors may approve / deny / table for more information.

The Planning Commission and the Board of Supervisors has a right to call extra public hearings at their discretion if the Board(s) decide they are needed.

You or your agent are encouraged to attend these meetings to answer any questions that may arise concerning your application / proposal. The County strongly encourages the applicant to visit the area around his proposed site and understand what the adjoining landowner concerns are.

Ladies and Gentleman,

My name is Joseph Kauffman and I am the property owner of the property that I am requesting a Special Use Permit to the change from agricultural to light industrial/retail sales. The proposed business will be called Evergreen Builders. I live on the property that is already in two parcels. There was a mobile home on part of the parcel that I am requesting to be changed, but I had it removed and have began to prepare the land to have two pole buildings built, if my application is approved. My home and remaining farmland is located behind this tract of land on a separate parcel. I had a composite plat map prepared and it's enclosed with this application. I had the property graded by a professional contractor this summer and there has already been ground compaction done with crush-run and #57 gravel. The same contactor installed the drainage ditches with riprap damming to control the storm water flow. I am sorry, I was not aware at that time I should have contacted Buckingham County for permission or application before doing this.

This property has been farmland for horses, cattle and goats, which I will continue to conduct on the meadows in back. I am only asking to convert the front 2.3+/- acres along the road front on Buckingham Springs Rd., to light industrial/retail sales. I plan to first build a pole building up to 36'x60' to begin building sheds, small garages and other utility buildings that will be shipped off my property by large pickup trucks with lowboy trailers under 26,000 pounds GVW, to be delivered to shed dealers that I will be under contract to produce. Within the next 2-10 years, as the business grows, I am requesting a second pole building up to 60'x120' to be built to store the lumber and hardware used to manufacture the sheds as well as additional building area, as needed. This building will be located behind the first and it will be within all the required setbacks needed. The lot on the east side of the proposed easement to my residence will be used to place finished sheds waiting to be picked up. The open area in between the driveway and the buildings will be there to allow trucks to deliver lumber and pick up the finished sheds for delivery. I will be having my lumber and building materials delivered from local building material suppliers by tractor trailer up to 2-3 times a week at peek. There should not be more than 6-8 trucks coming and going from the property during the weekdays and the property is located on an open straight stretch of road with no trees blocking the view.

My plan is to build sheds and structures that have been ordered through dealers that I have contracts with. If permitted, I would also take orders over the internet and the structures would be delivered the same way, so there would be very little customer traffic. I have sons that will eventually be working the business when they are old enough and I would like to be able to allow them to begin building small wooden crafts to be taken and sold at Amish-owned stores in the area.

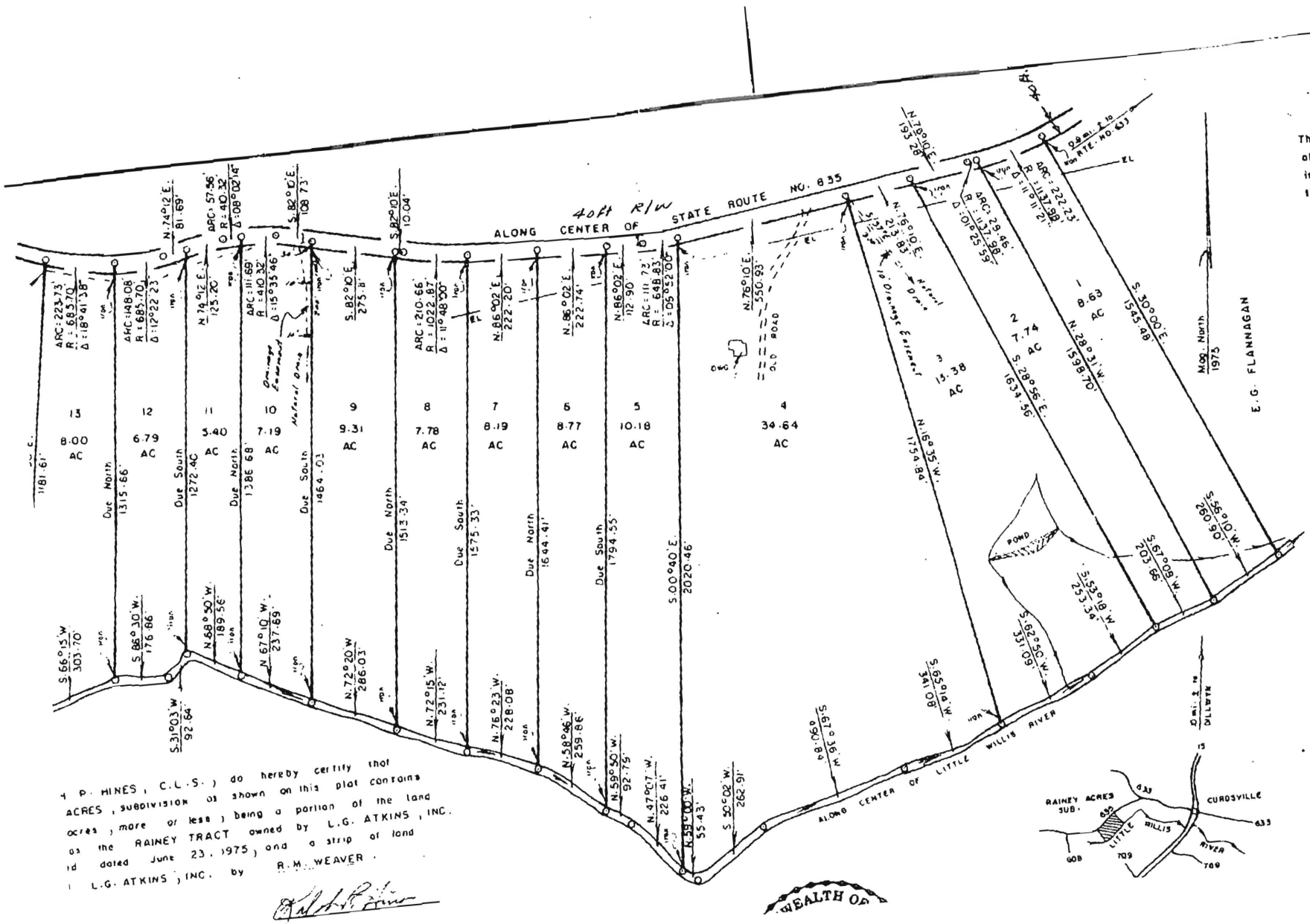
These buildings would not have electric, water or septic, as the tools would be air powered by a diesel generator and any lights would be off-grid solar. I have a landline phone with wireless email that is also solar.

I will have a 40 yard commercial roll off dumpster to dispose of all scrap lumber and building materials, so nothing will be dumped on the property. Also, there are not any hazardous materials used in building the structures and I will not have a sawmill as part of my operation.

I believe it's important that you know my business background. I moved here with my wife and children in Feb. 2020 From Christiana Pa. in the heart of Lancaster County. I have worked in the shed building industry for my whole life. I am still operating a shed business in Pa. which is called Kauffman Woodworks LLc on a Total of 3 acres. My Grandfather and my Father had this Buisness, so this is the third Generation. I want to sell my Buisness in Pa. to my youngest Brother in the next 2 years. I estimate this business will begin with 175,000.00-250,000.00 gross annual salesin the first 1-3 years and there will be less than 6 Employees until the second building is completed I might have a total of 15 employees. The hours of operation would be 6:30 AM to 4;30 PM Monday thru Friday and Saturdays depending on work load.

Thank you,

Joseph Kauffman



The platting or dedication of 13 lots, totaling 138.0 is with the free consen the desire of the undersi

STATE OF VIRGINIA
COUNTY / CITY OF Pri.
to wit:
I, ANITA T. BAIL
and for the County / City do hereby certify that

whose name/s is/are s the 4th day of Fe acknowledged the same

My commission expires

In order to maintain the of the right of way as Virginia reserves the p to use these areas f of the roadways.

This subdivision known is approved by the un existing regulations and

2-2-77

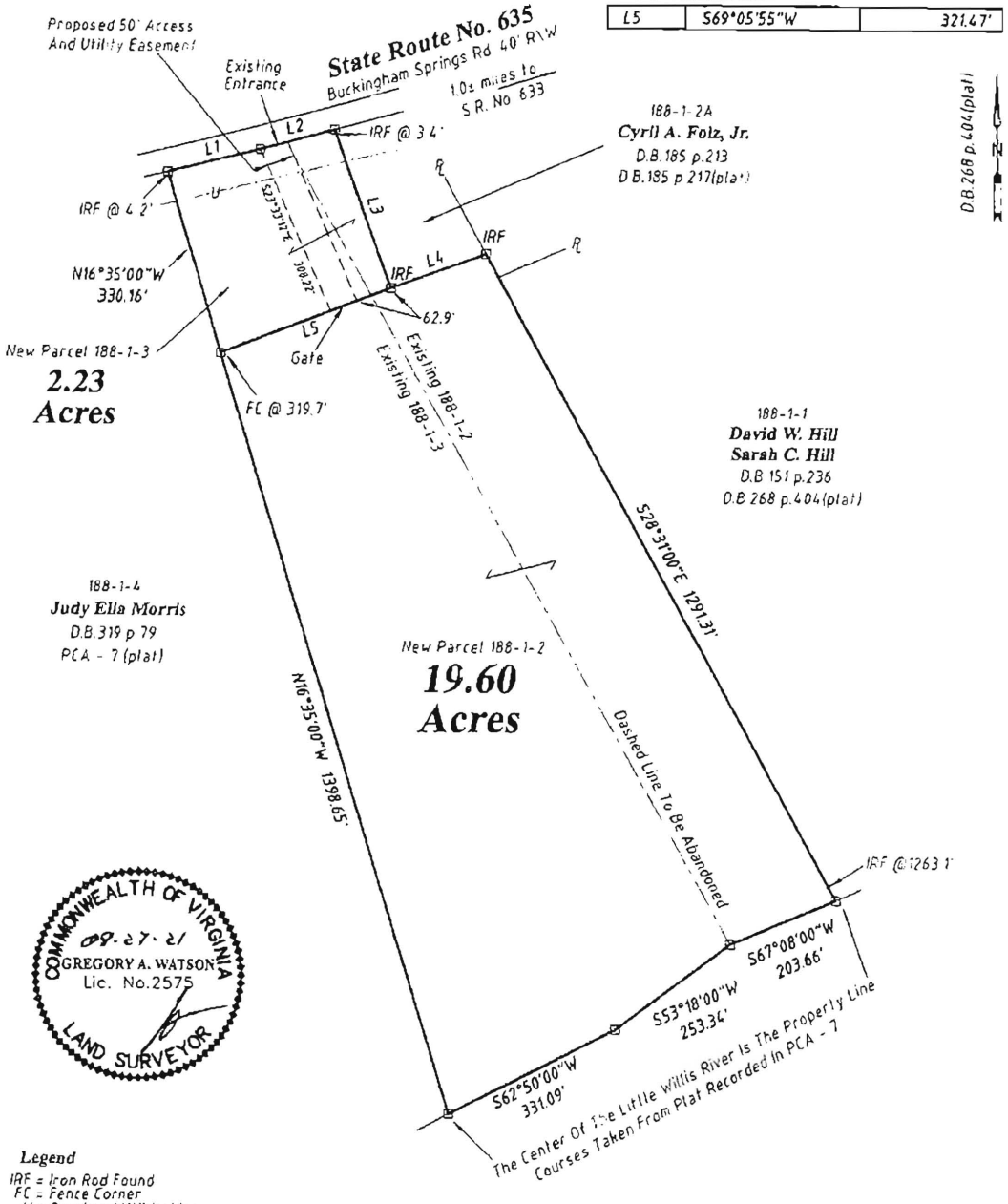
I P. HINES, C.L.S.) do hereby certify that ACRES, SUBDIVISION as shown on this plat contains acres, more or less) being a portion of the land as the RAINEY TRACT owned by L.G. ATKINS, INC. d dated June 23, 1975) and a strip of land L.G. ATKINS) INC. by R.M. WEAVER.

WEALTH OF

Watson and Duggan PLC
Land Surveying
1001 E. Third St., Farmville, Va 23901
434-391-3500

Line Table

LINE	BEARING	DISTANCE
L1	N76°16'49"E	170.69'
L2	N74°57'49"E	135.81'
L3	S19°22'22"E	294.11'
L4	N70°03'06"E	178.53'
New Division Line		
L5	S69°05'55"W	321.47'



COMMONWEALTH OF VIRGINIA
09-27-21
GREGORY A. WATSON
Lic. No.2575
LAND SURVEYOR

Legend
IRF = Iron Rod Found
FC = Fence Corner
U = Overhead Utility Line

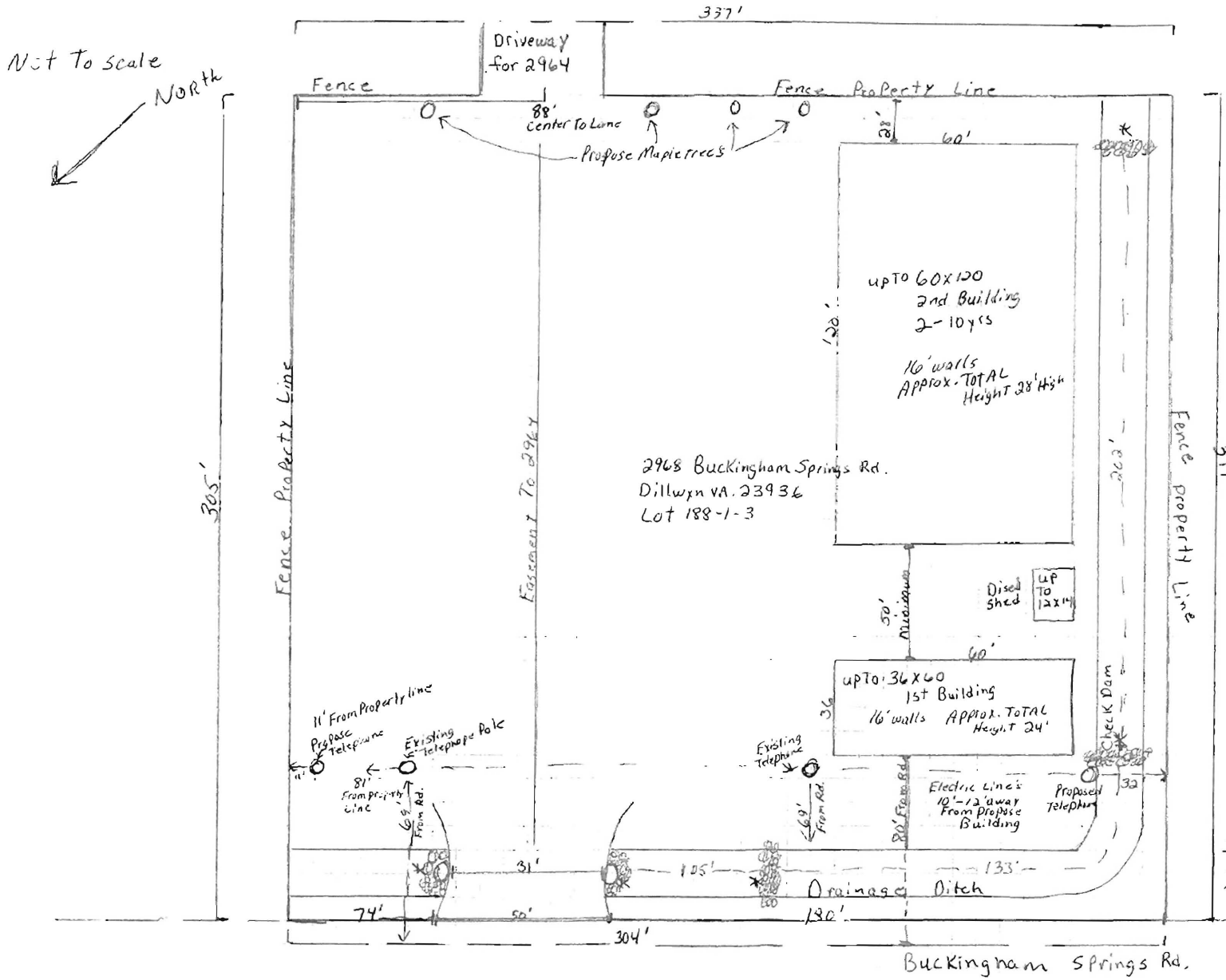
Notes
1. This survey is subject to any easement of record and other pertinent facts which a title search might disclose.
2. This plat is based on field work completed in Nov. 2017, some current field work, and subdivision plat recorded in PCA - 7

Approved For Recordation In Buckingham Co., Va
10/1/2021
County Agent

Plat Of Boundary Line Adjustment

For: Joseph Kauffman
Being The Properties Owned By
Joseph S. Kauffman
Rachel F. Kauffman
D.B 439 p 976
Francisco District, Buckingham County, Va
21126 09-27-21

0 200 400 600
1in = 200ft



Joseph S. Kaufman
2964 Buckingham Springs Rd.
Dillwyn VA. 23936

Project name
Evergreen Builders

No mature Tree lines

Not in Flood Plain

Buildings 40' off of Property line on This Backside

* Check Dam for Drainage

Drainage Ditch Approx 14' wide

Drainage Dikh is 10' away From Rd.

I want To plant Evergreen Trees Along Buckingham Springs Rd. Trees would Approx. be 17' away From Rd. Center of Tree To Rd.

This would Approx. Be 42 Trees 6' Apart

Confirmation Number: 8341533

Virginia

Buckingham County

Cashier 2 - POS

Transaction Details

Parcel/Bill/Account Number
188 1 3
Name
KAUFFMAN JOSEPH
Buckingham Payment
MISC

Credit Card Payment Address Information

Order Number	**8341533**
Customer Name	**JOSEPH KAUFFMAN**
Email Address	
Address	
	,
Phone Number	**(717) 529-2395**
Credit Card Number	**4XXX XXXX XXXX 6922**
Credit Card Type	**Visa**
Expiration Date	**0425**
Operator Name	
Transaction Time	**10/1/2021 11:40:19 AM**
Authorization Code	**00635G**
Convenience Fee Authorization Code	**00606G**
Transaction ID	**1960828064**
Agency Total	**560.00**
Convenience Fee	**$14.00**
Total Amount Charged to Card	**574.00**

_____Customer Signature

ONE OR BOTH CHARGES WILL APPEAR AS PAYGOV.US ON YOUR CARD STATEMENT.

For questions about this payment, please call (866) 480-8552.

Disputing a charge with your credit card company may result in an additional $40.00 charge.

Ike Yoder
7041 Crumptown Road
Farmville, Va 23901

January 10, 2022

County of Buckingham
Zoning and Planning Department
Attn: Nicci Edmondston
3380 West James Anderson Hwy.
Buckingham, VA 23921

RE: Case 21-SUP298

Dear Mrs. Edmondston:

In order to provide a complete presentation that will address the Planning Commission's concerns stated at the December 27, 2021 meeting, I request that the County agree to suspend the consideration of my application (Case 21-SUP298) until further notice. Upon sufficiently gathering the requested data and information to address the Commissioner's concerns we will provide a written request to unsuspend the case and submit documents to you on the due date for the following Planning Commission meeting.

I appreciate your consideration in this matter.

Sincerely,

Ike Yoder

Buckingham County Planning Commission
January 24, 2022
Administration Building
7:00 PM
Request to Suspend Consideration Case 21-SUP298

Owner/Applicant: Landowner Ike Y Yoder
Rebecca H Yoder
7041 Crumptown Road
Farmville, VA 23901

Applicant Ike Y Yoder
7041 Crumptown Road
Farmville, VA 23901

Property Information: Tax Map 194, Parcel 15, containing approximately 122.58 acres, located at 7041 Crumptown Road Farmville, VA 23901, Curdsville Magisterial District.

Zoning District: Agricultural District (A-1)

Request: The Applicant wishes to Obtain a Special Use Permit for the Purpose of Operating a Sawmill.

Background/Zoning Information: This property is located at 7041 Crumptown Road Farmville, VA 23901 in the Curdsville Magisterial District. The landowners are Ike and Rebecca Yoder and applicant is Ike Y Yoder. This property is zoned Agriculture (A-1). The Zoning Ordinance does not permit a Commercial Sawmill as a Permitted by Right Use Agricultural A1 Zoning District. However, Within the A-I Agricultural District, a Commercial Sawmill may be permitted by the Buckingham County Board of Supervisors by a Special Use Permit following recommendation by the Planning Commission in accordance with this ordinance and the Code of Virginia. The Planning Commission may recommend and the Board may impose conditions to ensure protection of the district if the Special Use Permit is approved. This case came to the attention of the Zoning Administrator by way of a complaint. After investigation and meeting with the landowner, it was discovered that a large area of land had been disturbed and DEQ approval and permitting, and Erosion and Sediment Contol/Land Disturbance Permit would be necessary. DEQ and County Officials conducted a site visit on September 24, 2021, and the communication is included in this packet. Mr. Yoder has contacted a civil engineer and is working to mitigate issues immediately. Mr. Yoder wishes to stay in compliance with all federal, state, and local permitting.

Below are conditions that you may consider attaching to the request if approved:

1. That all federal, state and local regulations, ordinances and laws be strictly adhered to.

2. Right of ways and roadway shoulders shall not be used for parking.

3. The property shall be kept neat and orderly.

4. That the applicant pursues a commercial solid waste container and follow the County Solid Waste Ordinance.

5. That all documentation submitted by the applicant in support of this special use permit request becomes a part of the conditions except that any such documentation that may be inconsistent with these enumerated conditions shall be superseded by these conditions.

6. Nothing in this approval shall be deemed to obligate the County to acquire any interest in property, to construct, maintain or operate any facility or to grant any permits or approvals except as may be directly related hereto.

7. The County Zoning Administrator and one other County staff member, as appointed by the County Administrator, shall be allowed to enter the property, with proper notice, if a complaint is registered against the property for noncompliance with this permit. Any complaints not solely related to this permit will be given to the appropriate department or agency.

8. In the event that any one or more of the conditions is declared void for any reason whatever, such decision shall not affect the remaining portion of the permit, which shall remain in full force and effect, and for this purpose, the provisions of this are hereby declared to be severable

9. That any infraction of the above mentioned conditions could lead to a stop order and discontinuation of the special use permit, if it be the wishes of the Board of Supervisors.

10. That the applicant(s) and landowner(s) understands the conditions and agrees to the conditions.

The Planning Commission held a Public Hearing for this Case on December 27, 2021. At this time, the Planning Commission requested more information from Mr. Yoder regarding; additional traffic impacts, DEQ Notice of Violation and necessary actions moving forward, traffic safety, and noise. A written request was received from Mr. Yoder to suspend consideration of this application until further notice.

BY-LAWS
BUCKINGHAM COUNTY PLANNING COMMISSION

Article 1 – Objectives

1-1. The Buckingham County Planning Commission was established in conformance with a resolution adopted by the Buckingham County Board of Supervisors on February 5, 1962. The present Commission has adopted the following Articles in order to facilitate its powers and duties in accordance with the provisions of Title 15.2, Chapter 22, Article 2, of the 1950 Code of Virginia, as amended.

1-2. The official title of this Commission shall be the "Buckingham County Planning Commission."

Article 2 – Members

2-1. The Planning Commission shall consist of not less than five, nor more than fifteen members, all of whom shall be residents of the County. One member shall be one of the Board of Supervisors and the remaining members shall be County citizens appointed by the Board of Supervisors.

2-2. The term of the member from the Board of Supervisors shall be at the pleasure of the Board of Supervisors. Members are appointed for terms of four (4) years by the Board of Supervisors. Any vacancy in membership shall be filled by appointment by the Board of Supervisors and shall be for an unexpired term only. Any appointed member may be removed by the Board of Supervisors for malfeasance in office. The Board of Supervisors may provide for the payment of expenses incurred by the performance of their official duties.

2-3. The term of a Commissioner member shall expire immediately prior to the beginning of the regular meeting at which meeting his successor's term of office shall begin.

Article 3 – Officers and Their Selection

3-1. The officers of the Planning Commission shall consist of a Chairman, a Vice Chairman, and a Secretary. The elected officers shall be the Chairman and the Vice Chairman.

3-2. The Nomination of officers shall be based on nominations of the members for the consideration of Chairman and Vice Chairman.

Any Chairman or Vice Chairman may decline and allow further nominations until the Offices are filled. Official action of election of officers shall follow immediately.

3-3. A candidate receiving a majority vote of the entire membership of the Planning Commission shall be declared elected. They shall take office immediately and serve for one (1) year or until their successor shall take office.

3-4. Vacancies in office shall be filled immediately by the rotation election procedures listed above.

Article 4 – Duties of Officers

4-1. The Chairman shall be a citizen member of the committee and shall:
- 4-1-1. Preside at all meetings.
- 4-1-2. Appoint committees, special and/or standing.
- 4-1-3. Rule on all procedural questions (subject to a reversal by a two-thirds (2/3) majority vote by the members present.
- 4-1-4. Be informed immediately of any official communication and report same at the next regular meeting.
- 4-1-5. Carry out other duties as assigned by the Commission.

4-2. The Vice Chairman shall be a citizen member of the Commission and shall:
- 4-2-1. Act in the absence or inability of the Chairman to act.
- 4-2-2. Have the power to function in the same capacity as the Chairman in cases of the Chairman's inability to act.

4-3. The Secretary shall:
- 4-3-1. Be the County Administrator or his/her designee.
- 4-3-2. Keep a written record of all business transacted by the Commission.
- 4-3-3. Notify all members of all meetings.
- 4-3-4. Keep a file of all official records and reports of the Commission.
- 4-3-5. Certify all maps, records, and reports of the Commission.
- 4-3-6. Give notice of all hearings and public meetings.
- 4-3-7. Attend to the correspondence of the Commission.
- 4-3-8. Prepare and be responsible for the publishing of advertisements relating to public hearings.

Article 5 – Standing and Special Committees

5-1. Any committee necessary in the function of the Commission shall be appointed by the Chairman, who will specify their purpose and tenure, subject to majority approval by the Commission.

Article 6 – Meetings

6-1. Regular meetings of the Commission shall be held on the fourth Monday of every month beginning with January at 7:00 p.m. Special meetings shall be called, as needed. When a meeting date falls on a legal holiday, the meeting shall be held on the day following unless otherwise designated by the Commission.

6-2. Special meetings of the Commission shall be called by the Chairman or by two members upon written request to the Secretary. The Secretary shall mail to all members, at least five days in advance of a special meeting, a written notice fixing the time and place of the meeting and the purpose thereof.

6-3. All regular and special meetings, hearings, records, and accounts shall be open to the public.

6-4. A majority of the membership of the Commission shall constitute a quorum. No action of the Commission shall be valid unless authorized by a majority vote of those present and voting. Voting may be by roll call, in which case a record shall be kept as a part of the minutes.

6-5. Any request for consideration by the Commission shall be presented to the Secretary of the Commission and/or the County Administrator at least ten (10) days prior to the scheduled meeting or the Commission shall not be obligated to consider the matter at its next scheduled meeting.

6-6. For record keeping purposes, the Secretary of the Commission or other appointed staff will provide a sheet for all public commenters to write their name and address after they have finished their comments.

6-7. The Commission reserves the right to require that public comment and public hearing participants, with the exclusion of presenters, applicants and staff, sign up on a sign-up sheet prior to a meeting. The person chairing the meeting will have a last call for any additional names to be added directly before the scheduled public comment time or scheduled hearing. Then the Chair or appointed member shall call the individuals with preference given to the Buckingham County citizens and landowners to speak first.

6-8. During public comments and public hearings there shall be no discussion between the public and the Commission unless granted by the Chairman.

6-9 The following statement will be on all public comment and public hearing sign-up sheets and may be read by the Planning commission as a reminder to citizens to uphold the truth: *The Planning Commission would like to remind all speakers that they have a First Amendment right to speak. However, speakers do not have indemnification if the statement(s) are made with actual or constructive knowledge that they are false, or with reckless disregard for whether they are false. We ask all speakers to keep to what they know to be the truth and by signing up for comment you are acknowledging your understanding and agreement with the above.*

6-10 In the event of inclement weather, the regularly scheduled Planning Commission meeting will be held on the following Monday of the month.

6-11 Meetings held through electronic communications:

This policy is adopted pursuant and consistent with §2.2-3708.2 of the 1950 Code of Virginia, as amended. A. The following provisions shall apply to the Planning Commission for Buckingham County (Planning Commission):

1. Subject to the requirements of Section 6, the Planning Commission may conduct any meeting wherein the public business is discussed or transacted through electronic communication means if, on or before the day of the meeting, a member of the Planning Commission holding the meeting notifies

the Chair of the Planning Commission that: a. Such member is unable to attend the meeting due to (i) a temporary or permanent disability or other medical condition that prevents the member's physical attendance or (ii) a family member's medical condition that required the member to provide care for such family member, thereby preventing the member's physical attendance; or b. Such member is unable to attend the meeting due to a personal matter and identifies with specificity the nature of the personal matter. Participation by a member pursuant to this subdivision b is limited each calendar year to two meetings or 25 percent of the meetings held per calendar year rounded up to the next whole number, whichever is greater.

2. If participation by a member through electronic communication means is approved pursuant to subdivision 1, the Planning Commission holding the meeting shall record in it's minutes the remote location from which the member participated; however, the remote location need not be open to the public. If participation is approved pursuant to subdivision 1 a, the Planning Commission shall also include in its minutes the fact that the member participated through electronic communication means due to (i) a temporary or permanent disability or other medical condition that prevented the member's physical attendance or (ii) a family member's medical condition that required the member to provide care for such family member, thereby preventing the member's physical attendance. If participation is approved pursuant to subdivision 1 b, the Planning Commission shall also include in its minutes the specific nature of the personal matter cited by the member. If a member's participation from a remote location pursuant to subdivision 1 b is disapproved because such participation would violate the policy adopted pursuant to Section B, such disapproval shall be recorded in the minutes with specificity.

3. Any Planning Commission, or any joint meetings thereof, may meet by electronic communication means without a quorum of the Planning Commission physically assembled at one location when the Governor has declared a state of emergency in accordance with § 44-146.21, provided that (i) the catastrophic nature of the declared emergency makes it impracticable or unsafe to assemble a quorum in a single location and (ii) the purpose of the meeting is to provide for the continuity of operations of the Planning Commission or the discharge of its lawful purposes, duties and responsibilities. The Planning Commission convening a meeting in accordance with this subdivision shall: a. Give public notice using the best available method given the nature of the emergency, which notice shall be given contemporaneously with the notice provided to members of the Planning Commission conducting the meeting; b. Make arrangements for public access to such meeting through electronic communication means, including videoconferencing if already used by the Planning Commission; c. Provide the public with the opportunity to comment at those meetings of the Planning Commission when public comment is customarily received; and d. Otherwise comply with the provisions of this policy. The nature of emergency, the fact that the meeting was held by electronic communication means, and the type of electronic communication means by which the meeting was held shall be stated in the minutes.

The provisions of this subdivision 3 shall be applicable only for the duration of the emergency declared pursuant to §44-146-17 or 44-146.21. B. Participation by a member of the Planning Commission in a meeting through electronic communication means pursuant to subdivisions A 1 and 2 shall be authorized only if the following conditions are met: 1. The member gives proper notice of the member's inability to attend the meeting and the reasons the member is unable to attend; 2. The Chair shall make a preliminary determination if the non-attending member is able to participate through electronic means and shall announce that determination at the beginning of the meeting, setting forth when the request was received and why the member so requested; 3. If any member present disagrees with the determination of the Chair, the disagreeing member may request a vote of the Planning Commission members present on the Chairs decision. Each member shall be allowed, if the member so desires, to speak one time, for no more than 2 minutes, on the determination. The Chair may vote and a majority of members present and voting shall prevail.

4. The minutes shall reflect those items required by this policy. 5. A quorum of the Planning Commission is physically assembled at one primary or central meeting location; and
6. The Planning Commission makes arrangements for the voice of the remote participant to be heard by all persons at the primary or central meeting location. Nothing in this policy shall be construed to prohibit the use of interactive audio or video means to expand public participation. This policy shall be applied strictly and uniformly, without exception, to the entire membership and without regard to the identity of the member requesting remote participation of the matters that will be considered or voted on at the meeting.

ARTICLE 7 – ORDER OF BUSINESS

7-1. The order of business for a regular meeting shall be:

- 7-1-1. Call to order by the Chairman.
- 7-1-2. Invocation.
- 7-1-3. Pledge of Allegiance.
- 7-1-4. Determination of a quorum.
- 7-1-5. Adoption of agenda.
- 7-1-6. Consideration of minutes.
- 7-1-7. Public Participation.
- 7-1-8. Old Business.
- 7-1-9. New Business.
- 7-1-10. Report of officers, committees, and staff.
- 7-1-11. Adjornment.

7-2. Executive sessions may be held as needed

7-3. Parliamentary procedure in Commission meetings shall be guided by Robert's Rules of Order Amended for Small Groups.

7-4. The Planning Commission shall keep a set of minutes of all meetings, and these minutes shall become a public record.

7-5. The Secretary and Chairman shall sign all minutes.

ARTICLE 8 – HEARINGS

8-1. In addition to those required by law, the Commission, at its discretion, may hold public hearings when it decides that a hearing will be in the public interest.

8-2. Notice of a special hearing shall be published once a week for two successive weeks in a newspaper of general circulation in the area not less than five (5) days before the time of the public hearing.

8-3. The order for public hearings shall be:

8-3-1. The Chairman will request the Planner/Zoning Administrator to call the specific case being heard.

8-3-2. After hearing the specific case item, the Chairman will ask staff to present its report. Staff reports are available on the Friday prior to the public hearing.

8-3-3. The Chairman asks the applicant to present their case. Applicants may be limited on time at the discretion of the Chairman.

8-3-4. Following the staff's report and applicant's presentation, the Chairman will open the public hearing and call for public speakers. When called upon to speak, speakers must be recognized by the Planning Commission Chairman and must state name, address, and district. Spontaneous questions, comments and applause from the audience will not be acknowledged. Public speakers are allowed to speak for three (3) minutes. However, the Chairman reserves the right to set new speaking times at the start of each meeting. Commissioners should refrain from asking questions until the party addressing the Commission completes his or her entire presentation. For purposes of this guideline, the term "party" refers to staff, applicants and individual public speakers addressing the Commission. Once all speakers are heard, the public hearing will be closed. Applicant may have the opportunity to address the Commission on issues that arose during the public comment. At the discretion of the Chairman, additional questions from the public may be submitted to the Chairman and the applicant shall submit his/her responses to the questions through the Chairman.

8-3-5. At some point during the Commission discussion, a Commissioner may offer a motion that will be voted on by the Commission.

8-3-6. A letter (Letter of Recommendation) which accurately portrays the Commission's action in sufficient detail, including the motion and vote, is sent to the Board of Supervisors.

8-4. A record shall be kept for those speaking before the Commission at the hearing.

Article 9 – Correspondence

9-1. It shall be the duty of the Secretary to draft and sign all correspondence necessary for the execution of the duties and functions of the Planning Commission.

9-2. It shall be the duty of the Secretary to communicate as appropriate when necessary to make communications that cannot be carried out as rapidly through direct correspondence.

9-3. All official papers and plans involving the authority of the Commission shall bear the signature of the Chairman or Vice Chairman together with the certification signed by the Secretary.

Article 10 – Amendments

10-1. These rules may be changed by a recorded two-thirds (2/3) vote of the entire membership after thirty (30) days' prior notice.

Adopted	February 1962	Revised	October 2018
Revised	March 1998		

Revised	January 2009
Revised	January 2014
Revised	January 2016
Revised	January 2017

Planning Commission Work Session Dates – 2022

(Third Monday of the month, unless holiday)

Tentative, if necessary

January 17

February 21

March 21

April 18

May 16

June 20

July 18

August 22

September 19

October 17

November 21

December 19

Planning Commission Regular Meeting Dates – 2022

(Fourth Monday of the month, unless holiday)

January 24

February 28

March 28

April 25

May 23

June 27

July 25

August 29

September 26

October 24

November 28

December 26

Buckingham County Planning Commission
January 24, 2022
Administration Building
7:00 PM
Introduction of Case 22-SUP299

Owner/Applicant: Landowner Weyerhauser Company
220 Occidental Ave S
Seattle, WA 98104

Applicant Apex Clean Energy Inc
310 4TH St N, Suite 300
Charlottesville, VA 22902

Property Information: Tax Map 17 Parcel 8 containing approximately 520.185 acres, Tax Map 17 Parcel 9 containing 97.4 acres, Tax Map 17 Parcel 13 containing approximately 59.5 acres, and Tax Map 18 Parcel 2 containing approximately 1286.43 acres. The parcels are North of Bridgeport Road, East of Route 20, West of Hardware Road, Slate River Magisterial District.

Zoning District: Agricultural District (A-1)

Request: The Applicant wishes to Obtain a Special Use Permit to allow for the construction and operation of a 149.5 MW utility scale solar facility on approximately 1,996 acres in Buckingham County.

Background/Zoning Information: This property is located North of Bridgeport Road, East of Route 20, West of Hardware Road, Slate River Magisterial District containing Tax Map 17 Parcel 8 containing approximately 520.185 acres, Tax Map 17 Parcel 9 containing 97.4 acres, Tax Map 17 Parcel 13 containing approximately 59.5 acres, and Tax Map 18 Parcel 2 containing approximately 1286.43 acres. The landowner is Weyerhauser Company, and the applicant is Apex Clean Energy Inc. This property is zoned Agriculture (A-1). The Zoning Ordinance does not permit a Public Utility Generating Plant as a Permitted Use. However, Within the A-I Agricultural District, Public utility generating plants, public utility booster or relay stations, transformer substations, meters and other facilities, including railroads and facilities, and water and sewage facilities may be permitted by the Buckingham County Board of Supervisors by a Special Use Permit following recommendation by the Planning Commission in accordance with this ordinance and the Code of Virginia. The Planning Commission may recommend and the Board may impose conditions to ensure protection of the district if the Special Use Permit is approved. Riverstone Solar, LLC (the "Applicant" or "Riverstone") requests a Special Use Permit ("SUP") to allow for the construction and operation of a 149.5 MW utility-scale solar facility (the "Project") on approximately 1,996 acres of private land in northern Buckingham County, Virginia (the "Property"). The Project is being developed by Apex Clean Energy, a renewable energy development, construction, and operations company based in Charlottesville, Virginia. The Board of Supervisors approved Case 21-SUP290 for Apex Riverstone Solar LLC project on November 8, 2021. Condition #7 limited the solar equipment and accompanying storm water

features to no more than 1,729 acres of the incorrectly stated acreage of the Project as 1,966, and should have stated 1,996 acres. The application for Case 22-SUP299 was received due to ongoing studies and evaluations necessitating the request for the additional 35 acres that will be used by the Applicant as additional space that will permit flexibility in the design and construction of the project. The Applicant states that while the Project can still be constructed in accordance with the 21-SUP290 approval, the additional 35 acres will permit flexibility to avoid cultural or environmental sensitive areas that may be identified during environmental studies or may be used for an alternative internal access to the Interconnection Switching Station, staging of construction equipment, or additional Solar Equipment area.

Below are conditions that you may consider attaching to the request if approved:

1. Riverstone Solar, LLC or any successors, assignees, current or future lessee, sub-lessee, or owner of the solar energy facility (the "Applicant") consent to annual administrative inspections by Planning Department Staff for verification of compliance with the requirements of this SUP after the completion of the construction of the Project. During construction of the Project, the County and its assigns and designees shall have access to the site for inspections and to assure compliance with the conditions of the SUP.

2. The Applicant shall sign the list of the adopted conditions for this SUP signifying acceptance and intent to comply with these conditions.

3. That all federal, state, and local laws, regulations, permit requirements and ordinances will be adhered to including but not limited to:

a. All active solar systems and solar equipment used in this Project shall meet the requirements of the National Electrical Code (NEC), National Electrical Safety Code (NESC), American Society of Civil Engineers (ASCE), American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), or International Electrotechnical Commission (IEC) as applicable and comply with state building code and shall be inspected by a county building inspector through the building permit process.
b. An Erosion and Sediment Control Plan must be submitted to the County and approved by the Soil and Water Conservation District prior to any land disturbance.
c. The erosion and sediment control plan shall be prepared in accordance with the Virginia Erosion and Sediment Control Handbook. As an additional precaution, the erosion and sediment control plan will be implemented as a sequential progression, demonstrating that not more than 25% of the Project Area be disturbed at any one time during construction without temporary seeding or other stabilization in accordance with the Virginia Erosion and Sediment Control Handbook. Nothing in this condition shall prevent continued construction activities after areas have been stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, and such stabilized areas will not be subject to the 25% limitation in sentence 2 of this condition. The erosion and sediment control plan will provide the means and measures in accordance with the Virginia Erosion and Sediment Control Handbook to achieve stabilization of the disturbed areas and to comply with this condition.
d. A Stormwater Management Plan must be submitted to the Virginia Department of Environmental Quality (VDEQ) and approved by VDEQ prior to any land disturbance.
e. The Project shall fully comply with all applicable provisions of the Buckingham County Zoning Ordinance, to the extent not modified herein, throughout the life of this SUP.

4. That the building permit application must be submitted within 2 years of obtaining the Special Use Permit and the commercial generation of solar electricity shall begin within 18 months of the approval of the building permit or this SUP shall be null and void. The building permit deadline will be extended for 12 months (3 years total), and the construction time period extended by 12 months (30 months total) by administrative approval of the County Administrator after consultation with the Board of Supervisors due to delays in state permits, interconnection approval, or other good cause demonstrated by the Applicant. Any timeframe under which the Commonwealth is under an Executive Order of the Governor declaring a statewide emergency will toll the timeframe specified in this condition.
5. All racking, solar modules, inverters, breakers, switches, cabling, communications components, and other ancillary components necessary to convert solar energy to electricity and interconnect to the electrical transmission are considered "Solar Equipment" and subject to the requirements for such, together with setback requirements of that district and other requirements, unless otherwise stated in these conditions. Solar Equipment shall not include access roads and transmission lines and poles. "Project Area" shall include all areas within the Property line boundary that include, but not limited to the following: Solar Equipment, ingress/egress, access roads, fencing, parking, laydown areas, setbacks, buffers, storage area, wetlands, erosion and sediment control features, storm water management features, and other ancillary components. Battery storage and other energy storage methods are not approved as part of this SUP and will require separate special use permitting.

6. This SUP shall be binding on the Applicant or any successors, assignees, current of future lessee, sub-lessee, or owner of the solar energy facility.

7. The construction of the Project shall be in substantial conformance with these conditions and in general conformance with the Special Use Preliminary Site Plan prepared by Apex Clean Energy dated January 12, 2022 (the "General Plan"). The Solar Equipment and accompanying storm water features shall be limited to no more than the 1,765 acres of the 1,996-acre Property as shown on the General Plan. Modifications to the General Plan shall be permitted at the time of building permit based on state and federal approvals and final engineering and design requirements that comply with these conditions.

8. All site activity required for the construction and operation of the solar energy facility shall be limited to the following:

a. All pile driving activity shall be limited to the hours from the earlier of sunrise or 8 a.m. to the later of 6 p.m. or sunset, Monday through Saturday. Applicant may request permission from the Zoning Administrator to conduct piling driving activity on Sunday, but such permission will be granted or denied at the sole discretion of the Zoning Administrator; and
b. All other construction activity within the Project Area shall be permitted Monday through Sunday in accordance with the provisions of the County's Noise Ordinance.

9. After completion of construction, the solar energy facility, during normal operation, but excluding maintenance, shall not produce noise that exceeds 50 dbA as measured at the property lines of the project boundary, unless the owner of the adjoining affected property has given written agreement to a higher level.

10. a. A minimum three hundred (300) foot setback shall be maintained from Solar Equipment to any adjoining or adjacent residential dwellings that exist at the time of the approval by the Board of Supervisors. This requirement may be reduced or waived for the life of the solar energy facility, if agreed to, in writing, by the owner of the residence. Transmission lines and poles, security fence, and project

roads may be located within the setbacks only where necessary. During construction, the setback may be used for the staging of materials and parking if the buffer is not disturbed. This requirement is intended to be in addition to the fifty (50) foot setback established from Solar Equipment to the property line such that all Solar Equipment will be no less than 350 feet from any adjoining or adjacent residential dwelling that exists at the time of the approval by the Board of Supervisors. Within the 350-foot buffer, the Applicant shall retain at least a three hundred fifty (350) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the property line.

11. a. A minimum of a fifty (50) foot setback from Solar Equipment to the property line and any public rights of way shall be provided around the perimeter of the Solar Equipment where it is adjacent to property not owned by the same property owner as covered in the SUP at the time of the approval by the Board of Supervisors. Within the fifty (50) foot setback, the Applicant shall retain at least a fifty (50) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the property line. Transmission Lines and poles, security fence, and project roads may be located within the setbacks only where necessary.

b. The Applicant will maintain all buffer areas with the advice and support of a professional arborist or forester for the duration of the project's operational life. Such maintenance may include thinning, trimming, seeding or other modifications to the buffer to ensure the health of the vegetated buffer areas, public safety, and the energy efficiency of the Project. In the event the health of the vegetation within the buffer area is compromised and no longer substantially obscures from view the Solar Equipment and security fence, the Applicant will plant a new buffer or supplement the remaining buffer, including timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist or Forrester.

12. a. Along existing public right-of-way (ROW) where there is existing timber, the Applicant shall retain at least a fifty (50) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the public right-of-way. Along existing public rights-of-way where there is not at least 50' of vegetation and timber remaining to substantially obscure from view the Solar Equipment and security fence, the Applicant will create a buffer of at least fifty (50) feet. The new buffer will include timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist and subject to the prior written approval of the Zoning Administrator prior to the issuance of a building permit. All plantings installed in the buffer shall have an anticipated five-year height of six (6) to eight (8) feet after planting and an anticipated mature height of at least twenty (20) feet. Any new plantings shall be planted during the appropriate time of year after the completion of construction of the Project. The buffer may be included in the setback area.

b. The Applicant will maintain all buffer areas with the advice and support of a professional arborist or forester for the duration of the Project's operational life. Such maintenance may include thinning, trimming, seeding or other modifications to the buffer to ensure the health of the vegetated buffer areas, public safety, and the energy efficiency of the Project. In the event the health of the vegetation within the buffer area is compromised and no longer substantially obscures the visibility of the Solar Equipment and security fence, the Applicant will plant a new buffer, or supplement the remaining buffer, including timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist or forester.

c. A performance bond reflecting the estimated costs of anticipated landscaping maintenance, as determined by the Applicant with the advice of a professional arborist or forester, shall be posted by the Applicant prior to construction. This ensures buffer landscaping is adequately maintained for the life of the Project.

13. The Applicant shall install a security fence around the Solar Equipment that is a minimum six (6) feet in height. Fencing must be installed on the interior of the vegetative buffer required in this section so that it is screened from the ground level view of adjacent property owners. The fencing shall be always maintained while the facility is in operation.

14. Construction lighting shall be minimized and shall be directed downward. Post-construction lighting shall be limited to security lighting only and shall be full cut-off lighting pointed in a down direction.
15. The Project shall not receive a building permit until evidence has been given to Buckingham County that the electric utility company has a signed an interim interconnection service agreement or interconnection service agreement with the permittee.

16. If the solar energy facility is inactive completely or substantially discontinuing the delivery of electricity to an electrical grid) for a continuous twelve (12) month period it shall be considered abandoned. The Applicant shall provide notice to County Administrator immediately upon the Project becoming abandoned, inactive and/or shutting down operation. The Applicant or its successor and/or assign ("Project Owner") shall decommission the Project within twelve (12) months abandonment, inactivity, or substantially discontinuing the delivery of electricity to an electrical grid, whichever occurs first. The decommissioning shall be in accordance with a Decommissioning Agreement between the Applicant, Project Owner and the County. If the Project (or relevant part) is not removed within the specified time, the County may cause the removal of the Project with costs being borne by the Project Owner as will be provided for in the approved Decommissioning Agreement. The costs of decommissioning shall be secured by an adequate surety in a form agreed to by the County Attorney, including but not limited to a bond, letter of credit, cash, or a parent guarantee by an investment grade entity. The cost estimate of the decommissioning shall be updated by the Applicant every five (5) years and be provided to the County. At its option, the County may require the surety amount be increased based on the new cost of decommissioning. The Decommissioning Agreement shall be agreed upon and the surety shall be provided before the issuance of the building permit.

17. The Project shall be decommissioned within twelve (12) months. The decommissioning shall require (i) the removal of any Project facilities installed or constructed thereupon, (ii) the filling in and compacting of all trenches or other borings or excavations made in association with the Project and (iii) the removal of all debris caused by the Project from the surface and 36" below the surface of the Property.

18. The Applicant shall coordinate with the County's emergency services staff to provide materials, education, and/or training to the departments serving the solar energy facility regarding how to safely respond to on-site emergencies.

19. Access roads are to be marked by the Applicant with identifying signage. The manufacturers' or installers' identification and appropriate warning signage shall be posted on or near the panels in a clearly visible manner. The signage must identify the owner and provide a 24-hour emergency contact phone number. Each access gate must also have the signage that identifies the owner and provides a 24-hour emergency contact phone number.

20. A Construction Traffic Management Plan and mitigation measures shall be developed by the Applicant and submitted to the Virginia Department of Transportation (VDOT) and Buckingham County for review. The Plan shall address traffic control measures, an industry standard pre- and post-construction road evaluation, and any necessary localized repairs (i.e., potholes, wash-boarding of gravel,

shoulder rutting, culvert crushing, etc.) to the public road that are required as a result of damage from the Project. The Applicant will take all reasonable precautions to minimize impact and damage to public roads including regular maintenance, washing and sweeping. If a traffic issue arises during the construction of the Project, the Applicant shall immediately develop with input from the County and VDOT and implement appropriate measures to mitigate the issue.

21. Parking of vehicles or staging of equipment or materials related construction or decommissioning of the Project shall be limited to the Project Area.
22. All panels will use anti reflective coatings. Exterior surfaces of the collectors and related equipment shall have a non-reflective finish and solar panels shall be designed and installed to limit glare to a degree that no after image would occur, towards vehicular traffic and any adjacent building.

23. No aspect of the Solar Equipment shall exceed 17 feet in height, as measured from grade at the base of the structure to its highest point. Such height restriction shall not apply to electrical distribution facilities, substations, or transmission lines.

24. Nothing in this SUP shall be deemed to obligate the County to acquire any interest in property, to construct, maintain or operate any facility or to grant any permits or approvals except as may be directly related hereto.

25. If any one or more of the conditions is declared void for any reason whatever, such decision shall not affect the remaining portion of the permit, which shall remain in full force and effect, and for this purpose, the provisions of this are hereby declared to be severable.

26. That any infraction of the above-mentioned conditions could lead to a stop order and discontinuation or revocation of the special use permit in accordance with Virginia law.

27. The Applicant will be restricted from using Paynes Road, Georgia Creek Road, Quail Run Lane and the portion of Paynes Pond Road from the intersection of Route 20 to the northern boundary of the Project Area for access to the Project Area during the construction and decommissioning phases of the Project. The Applicant will be restricted from using Paynes Road and Quail Run Lane during the operations and maintenance phases of the Project.

28. The Applicant will be restricted from utilizing photovoltaic panels with internal components containing cadmium telluride. Only silicon type panels, or those other panels that have been established as optimal standard best practice shall be utilized by the Applicant.

29. The Applicant will consider implementation of Pollinator Habitats where appropriate and in accordance with applicable laws and regulations.

Riverstone Solar, LLC

Special Use Permit Application

Buckingham County, VA

January 12, 2022

1. Contents

2. Application Narrative

2.1. Executive Summary

Riverstone Solar, LLC (the "Applicant" or "Riverstone") requests a Special Use Permit ("SUP") to allow for the construction and operation of a 149.5 MW_{ac} utility-scale solar facility (the "Project") on approximately 1,996 acres of private land in northern Buckingham County, Virginia (the "Property"). The Project is being developed by Apex Clean Energy, a renewable energy development, construction, and operations company based in Charlottesville, Virginia.

The Project will bring significant economic and environmental benefits to Buckingham County.

- Riverstone represents an initial capital investment of approximately $190,000,000. Based on the County's adoption of the revenue share ordinance option, pursuant to Virginia Code Section 58.1-2636, the Applicant estimates that the project will initially contribute approximately $209,300 per year. This amount will escalate by 10% every 5 years, with the total County revenue under the revenue share anticipated to be approximately $12,700,000 over the Project 40-year life. In addition to the revenue share, the Project will contribute real property taxes that are estimated to be approximately $2,100,000 over the Project's 40-year life, in addition to a Siting Agreement offered by the Applicant with a total value of 2,050,000, totaling a direct, net revenue of approximately $16,800,000 to Buckingham County. The revenues generated from Riverstone will come with virtually no impact on County capital facilities or public services.
- Riverstone will create approximately 482 full-time-equivalent (FTE) jobs during construction representing approximately $24.3 million in wages in Buckingham County's construction sector. The one-time pulse of economic activity associated with construction will generate approximately $1.9 million in state and local tax revenue.
- Once operational, Riverstone will provide approximately 355,496 MWh of clean energy to the local transmission grid, which is enough to power approximately 30,000 homes annually. Solar energy is clean, safe, and ecologically beneficial. Riverstone will emit no carbon pollution, release no heavy metals, acid gases or small particles, require no water to operate, and displace traditional sources of electric generation. In fact, Riverstone will offset 277,709 tons of carbon annually, equivalent to the carbon sequestered by 308,664 acres of U.S. forests every year.
- Riverstone will be decommissioned in accordance with the steps outlined in Attachment 3.12. of this application and with a full-detail decommissioning and rehabilitation plan, to be submitted to the County prior to approval of building permits. As part of the decommissioning the solar energy equipment will be removed, and the land will return to silviculture, or another use permitted by the Zoning Ordinance and as desired by the property owner.

2.2. The Company

The Applicant, Riverstone Solar, LLC is an indirect subsidiary of Apex Clean Energy Holdings, LLC ("Apex") Apex is an independent renewable energy company based in Charlottesville, Virginia. Since its founding in 2009, Apex has become one of the fastest-growing companies in the industry. The company has grown to more than 240 experienced and top experts in the industry, which includes a wide range of professionals such as meteorologists, wildlife biologists, engineers, project managers, developers, construction professionals, GIS analysts, and financial analysts who work together every day to design and build high-quality projects to meet the nation's growing demand for clean energy. Apex was established by clean energy executives with over a decade's experience in renewable energy. The group wanted to create a new kind of energy company focused on renewable only resources with the capacity to excel in every phase of project realization, from origination to asset management, including financing and construction. Today, Apex has one of the nation's largest, most diversified portfolios of renewable energy resources, capable of producing more than 18 GW of clean electricity. Apex has completed and sold 24 commercial wind and solar facilities in North America (totaling more than 5 GW), with five additional facilities currently under construction and several more under development. Apex serves as the operator for 11 commercial wind and solar facilities across North America (totaling an operating capacity of over 2 GW). Apex serves a wide range of utilities and load serving entities.

2.3. Application Contacts

The Applicant	**Legal Team**
Riverstone Solar, LLC c/o Apex Clean Energy 310 4th St. NE, Suite 300 Charlottesville, VA 22902 Contact: Jimmy Merrick Jimmy.merrick@apexcleanenergy.com 434-282-2107	Gentry Locke 10 Franklin Road, Suite 900 Roanoke, Virginia 24011 Contact: Jon Puvak Puvak@gentrylocke.com 540-983-9399

2.4. The Request, the Project, and the Property

The Board of Supervisors granted a SUP to the Applicant on November 8, 2021 (Case 21-SUP290) for a Solar Generating Facility for the purpose of constructing and operating Solar Photovoltaic modules to produce up to 149.5 megawatts of alternating current energy. The Board's approval followed the recommendation from the Planning Commission to approve the SUP. The Planning Commission recommended and the Board imposed twenty-nine (29) conditions on the SUP. Condition #7 limited the solar equipment and accompanying storm water features to no more than 1,729 acres of the 1,966 acre Property (this condition incorrectly stated the total Property acreage, which should be 1,996 acres). The Applicant continues to conduct studies and evaluate the Property since the first application was submitted in August 2021. The additional studies are necessary to receive additional permits from regulatory

agencies and will further inform the Applicant's final design. During this process, the originally proposed design may need to be slightly modified to abide by conditions that may be imposed by state and federal agencies that have jurisdictional authority over the project. The Applicant now requests this SUP and permission to construct the project on no more than 1,765 acres of the Property. The additional 35 acres will be used by the Applicant as additional space to allow flexibility in the design and construction of the Project. While the Applicant can still construct the Project in accordance with the initial SUP approval, the additional 35 acres will permit flexibility to avoid cultural or environmental sensitive areas that may be identified during environmental studies or may be used for an alternative internal access to the Interconnection Switching Station, staging of construction equipment, or additional Solar Equipment area. The originally proposed capacity of the project remains the same. Therefore, this new application improves the prior application without creating additional impacts.

The Applicant now requests a SUP to allow the construction and operation of the Project on the Property. If approved in accordance with the schedule set forth below, the Applicant estimates that construction will start as soon as Q4 of 2022, and the Project will commence operations in 2023. The Project is expected to be in operation for 40 years. The Property is comprised of four parcels totaling approximately 1,996 acres of land located in northern Buckingham County roughly bound by Bridgeport Road to the south, Route 20 to the west, Hardware Road to the east, and divided through the center by Paynes Pond Rd. A map of participating properties accompanies this request as Attachment 3.2., titled "The Property". Below is a summary of Buckingham County Tax Map Sections and Parcels of participating properties the Property is comprised of:

- Tax Map Section: 17, Parcel 8
- Tax Map Section: 17, Parcel 9
- Tax Map Section: 17, Parcel 13
- Tax Map Section: 18, Parcel 2

The application for an SUP requests the submittal of the Property vesting deeds and plats associated with the Property as well as a copy of the current real estate taxes, the location of existing and proposed utilities, above or underground and all existing easements, encumbrances, names of boundary roads or streets and widths of existing rights-of-way as well as proposed roads with right-of-way widths that will pass through the Property. Accompanying this request are four attachments providing this information.

- Attachment 3.6., titled "Easements and Encumbrances"
- Attachment 3.7., titled "Existing and Proposed Utilities"
- Attachment 3.8.4., titled "Current Real Estate Taxes"
- Attachment 3.8.9., titled "The Property Vesting Deeds and Plats"

The Applicant has secured rights to the Property through a long-term lease to use for installation of the Project's solar arrays. The property is zoned A-1 (Agriculture). The Applicant proposes to install Solar Photovoltaic (PV) modules to produce up to 149.5 MW_{ac}. The current land use of the Property is commercial silviculture and has been in this land use for a number of years. Most of the Property was recently timbered. The 149.5 MW_{ac} capacity is enough energy to power approximately 30,000 average sized homes each year. The power generated by the

Project will be linked to the electric transmission grid via the existing 138 kV overhead transmission lines adjacent to the Property.

As noted above, the Applicant has previously received approval of 21-SUP290. As a result, Buckingham County staff, elected officials, and the community are all very knowledgeable of the Project. This application is different in that it slightly expands the total acreage that the Applicant may use for stormwater and other Project related facilities. To bring the Project and its many benefits to Buckingham County in the initially proposed timeframe, the Applicant proposes the following schedule for the Buckingham County SUP process:

- **January 24:** Case is introduced to Planning Commission. Planning Commission sets Joint Public Hearing for next regularly scheduled meeting on February 28.

  February 28: Planning Commission and Board of Supervisors hold joint Public Hearing.

A PDF of the proposed schedule accompanies this application in Attachment 3.8.8., titled "Riverstone Solar, LLC Proposed Special Use Permit Schedule". In support of the Buckingham SUP process, the Applicant has provided a comprehensive list of Proposed Conditions that can be observed in Attachment 3.1., titled "Proposed Special Use Permit Conditions".

2.5. Special Use Preliminary Site Plan

The application for an SUP request requires the submittal of a preliminary site plan. Accompanying this request in Attachment 3.3., titled "Special Use Preliminary Site Plan" depicts the proposed layout of the Project on the Property.

The Special Use Preliminary Site Plan provides the preliminary layout of the solar panel arrays, collection, inverters, stormwater features, entrances, internal access roads, laydown yards, a temporary construction bridge, the proposed point of interconnection with the existing transmission lines and delineates the proposed screening along Rights of Way (ROW), and setbacks from property lines and occupied residences. The general locations of the Project's infrastructure, as observed in the Special Use Preliminary Site Plan, are subject to change based on the outcome of state and federal approvals as well as final engineering however the Applicant will still be required to abide by all commitments made in this application and the Proposed Special Use Permit Conditions accompanying application.

The County preliminary site plan checklist requires the submittal of topography, indicated by contour lines, as well as identification of areas having slopes of 15% to 25% and areas having slopes of 25% or greater. Accompanying this request in Attachment 3.5., titled "Property Slope and Topography", is a map indicating these features. The Property Slope and Topography illustrates very few areas within the Property that contain slopes greater than 15%. Where these slopes are present generally coincide with wetland features throughout the Property.

2.6. Construction Plan

To prepare the Property for installation of the solar panels, the Property will be graded for positive drainage, where necessary, and selected forested areas will be cleared. Posts will be constructed to serve as the main structural component upon which the panels will be installed. Second, the solar power systems are added to the supporting structures and foundations and the related equipment is installed. The equipment installed is generally no greater than twenty (20) feet in height. Inverters will be installed to convert the direct current (DC) from the solar power systems into alternating current (AC) for delivery into the electrical transmission system. As observed in the Special Use Preliminary Site Plan, the Project will interconnect within into the existing 138 kV Bremo Bluff to Scottsville overhead transmission line. Infrastructure to interconnect the Project to this transmission line includes a Project Collection Substation, as well as a utility-owned Interconnection Switching Station. The Project Collection Substation allows for the voltage of the power produced to be stepped up to the transmission line voltage (138 kV). The utility-owned Interconnection Switching Station allows the power to go onto the transmission grid, while also providing standard equipment for disconnecting the Project from the transmission grid should the transmission utility require. The existing 138 kV overhead transmission line that the Project will interconnect into may be reconfigured, and associated wiring will be installed to connect all the components and transfer the power to the electrical system. The foregoing installation includes cabinets and pads and similar enclosures for the Project's related equipment. A Collection Substation, an Interconnecting Switchyard, and a short transmission line connection, will be constructed to connect the Project to the AEP owned electrical transmission system.

The Special Use Preliminary Site Plan accompanying this request contemplates a single axis tracking system mounted with panels double stacked in portrait. Another racking technology, known as a fixed-tilt solar energy system, where the solar panels are mounted on fixed racking systems which do not move, could be utilized in place of a single axis tracking system.

Construction of the Project is estimated to take approximately 12 months to complete. The hours of construction activity, the level of traffic, and the number of employees on the Property during that period will vary by the type and phase of construction. A breakdown of expected construction activities is as follows:

- 3-4 months of site grading and site preparation including installation of erosion control and stormwater devices and construction of site access roads.
- 4-6 months of solar panel and electrical wire installation
- 1-2 months of site commissioning and clean up activities.

A detailed assessment of the anticipated traffic during construction accompanies this request in Attachment 3.11., titled "Transportation Statement" and is further described in Section 2.22 of this application narrative.

2.7. Operation Program

Once operational, the Project will be an unmanned facility collecting energy from the sun, which will be monitored remotely by a professional asset management firm. Apex Clean Energy's Remote Operations Center (ROCC) in Charlottesville, VA provides 24-hour monitoring for over 2,000 MW of operating projects across the country. The ROCC adheres to the National Institute

for Science and Technology (NIST) Risk Management Guide for Information Technology Systems to ensure strict, continuous cybersecurity monitoring. In addition to remote monitoring, employees and/or contractors will periodically access the Property to perform maintenance. Following construction, the Project will be accessed approximately 1-2 times per week, on average to perform landscaping activities.

2.8. Decommissioning Plan

At the end of the Project life, the Project will be decommissioned in accordance with a full-detail decommissioning and rehabilitation plan that will be submitted to Buckingham County prior to approval of building permits. A bond or letter of credit will be posted to protect the landowner and community against decommissioning costs. As part of the decommissioning, the land will return to silviculture, or another use permitted by the Zoning Ordinance and as desired by the Property owner. The Applicant has provided a sample decommissioning plan for a similar sized project located in Gloucester County, VA as Attachment 3.12., titled "Sample Decommissioning Plan" for the County to use as reference when reviewing the Project's plan to be provided prior to construction. As detailed in the Sample Decommissioning Plan, all Project's facilities will be dismantled and removed. During restoration, the Property will be returned to its previous condition. If it is agreed upon with the County, and the landowner, some or all of the Project access roads may be kept in place for continued use. Most of the Project's components will still have significant market value and are able to be reused or recycled. As a result of this, estimated salvage value should be considered in the exercise of estimating the decommissioning cost estimate and associated surety that will be placed with Buckingham County prior to the start of construction.

2.9. Local, State, and Federal Approvals and Consultations

In addition to the requested Special Use Permit, the project will obtain many other local, state, and federal approvals prior to construction.

At the local level, the Applicant confirms the proposed design and activities associated with the Project complies with all applicable provisions of the Buckingham County Zoning Ordinance. As committed to in the Proposed Special Use Permit Conditions, the Applicant will also be required to:

- Submit an Erosion and Sediment Control Plan to the County and approved by the Soil and Water Conservation District prior to any land disturbance. The Soil and Water Conservation District will review, approve, and oversee the Projects soil and erosion control plan to regulate water flow/runoff during both construction and operations.
- Submit a Decommissioning and Rehabilitation Plan to the County and provide a decommissioning surety prior to any land disturbance.
- Submit a Construction Traffic Management Plan to Buckingham County.
- Obtain a Building Permit from the Buckingham County Building Department.

At the state level, solar systems in Virginia require a separate and detailed application process through the Virginia Department of Environmental Quality (DEQ). DEQ has developed regulations for a "permit by rule" (PBR) for renewable energy. The regulations require detailed

information about the project and its potential effect on the environment and provide for public participation. Required pre-construction analyses relating to environmental impacts include natural-resource studies, cultural resource analyses, and mitigation plans if necessary.

In addition to an opportunity for public comment, DEQ will consult with other agencies in the Secretariat of Natural Resources such as the Department of Historic Resources (DHR), the department of Conservation and Recreation (DCR), and the Department of Wildlife Resources (DWR), in its determination of whether an application is complete and whether it meets the requirements of the regulations. Construction of the Project is subject to the PBR issued by DEQ. The governing regulation dictates that until the local zoning approvals are complete, the PBR application cannot be filed.

Currently, DEQ serves as the Virginia Stormwater Management Plan (VSMP) Authority on behalf of Buckingham County. Construction activities resulting in land disturbance equal to or greater than one acre will be required to apply for and receive a Stormwater Pollution Prevention Plan (SWPPP). The Applicant does qualify for this and will be required to obtain permit coverage prior to construction and implement a site specific SWPPP during the construction phase of the project. During construction, the Project will be subjected to site inspections performed by DEQ for a review of compliance associated with the SWPPP. This process will ensure the appropriate steps are taken to reduce any unwanted stormwater runoff that may result from construction activities.

The Project will also require close coordination with the Virginia Department of Transportation (VDOT) to ensure that construction and operations traffic does not negatively impact the safety of adjoining public roads, and that any impacts are properly mitigated. A detailed assessment of the anticipated traffic during construction and operations accompanies this request as Attachment 3.11., titled “Traffic Statement”. The Applicant will also be required to obtain Driveway permits for all proposed entrances to ensure the proposed entrances abide by VDOT standards.

At the federal level, the Project will coordinate closely with the United States Army Corps of Engineers (USACE) to verify that impacts to wetlands are minimized and properly mitigated, if necessary. A wetland delineation has been completed for the Property, and aside from limited road crossings, all streams and wetlands will be avoided. The Project is designed to comply with applicable USACE Nationwide Permitting regulations.

The Project will also undergo a Project Review with the US Fish and Wildlife Service (FWS) to ensure that threatened and endangered species are not negatively impacted by the project.

2.10. Comprehensive Plan - Land Use

The Project is substantially in accord with the Buckingham County Comprehensive Plan adopted on September 14, 2015 (the “Comprehensive Plan”). The County’s Comprehensive Plan outlines the “desired physical, social and economic development through 2020” and a “guide in the decision-making process”. The Comprehensive Plan is developed under the requirements of the Virginia Code which states in relevant part:

The comprehensive plan shall be made with the purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants, including the elderly and persons with disabilities.

The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement, shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use, as the case may be.

The following sections of this narrative explain the Project's relationship to the significant elements of the Comprehensive Plan.

The Comprehensive Plan recognizes the need for future commercial development while also balancing the agricultural and rural history of the County. A land use goal of the Comprehensive Plan is to "encourage commercial and industrial development in appropriate areas of the County." The Comprehensive Plan also recognizes that a significant portion of the County is used as farm and forestry land. The Property is currently used for commercial timber cultivation. The Comprehensive Plan states that as of 2012 there were approximately 317,151 acres of commercial forest in the County. The Comprehensive Plan also notes that loss of agricultural land and states that the economic benefits and environmental impacts should be considered to "maintain a balance between development and preservation objectives throughout the County." Consistent with the Future Land Use Map in the Comprehensive Plan, this Project is located outside of any Village Center/Growth Corridor, High Growth Area, or Recreation, Parks within the County. This Project has been specifically sited in a remote area of the County and will not impact adjacent land uses and have minimal demand on public resources. This Project preserves village centers and growth areas for other businesses and residents to locate.

The Applicant has included a condition that no more than 1,765 acres will be used for the Project. As a result of the size of this Project, the nature of the low impact development and life span, this Project will not have a long-term effect on the County's available timber resources. Unlike other types of development, this Project will not permanently alter the land. When the Project is no longer generating power from the sun, the Project will be removed, and the land can be returned to timber use and cultivation.

As discussed more fully below, the economic benefits of this Project will offset the temporary loss of forestry operations.

2.11. Comprehensive Plan - Community Design

This section of the narrative explains how the Project has been designed to not impact the surrounding community. As noted above, future development must be balanced with the preservation objectives and not impact the public health and welfare of the County citizens. The Applicant has considered the community from the onset of the design process of the Project. As further explained below, the Project will not adversely affect the health, safety, or welfare of the

people residing in the vicinity of the Project, nor impair the character of the district in which it is located or the values of the properties in the surrounding area.

2.11.1. Viewshed

The Project has been sited in a remote area of the County in order to mitigate views from adjacent parcels. Due to the natural vegetation and topography of the Property, surrounding roadways and residences will have very limited views of the equipment associated with the Project. The Applicant has provided a visual simulation of the project in attachment 3.13. titled, “Visual Simulation Analysis”. This analysis compares the 6 different vantage points of the Project Area with future renderings of the Project, both in 5-7 years as well as 10-15 years. The vantage points were chosen to conservatively show what neighboring landowners and the broader community can truly expect once the construction of the project is completed. The analysis shows that after construction the Project will be largely invisible from neighboring properties. This can be contributed to the applicant’s commitment in conditions 10 and 11 in the Proposed Special Use Permit Conditions, which serve to establish setbacks and preserve existing vegetation along all ROWs, adjacent property lines and existing residential dwellings. Based on the current Special Use Preliminary Site Plan, the closest adjoining home will be 355 feet from the closest solar panel and the average distance to adjoining homes will be 861 feet to the nearest solar panel. Solar panels, mounting systems, inverters, and most of the substation infrastructure are generally no greater than twenty (20) feet in height. Existing landscaping and vegetation and, if needed, planted buffers along Rights of Way (ROW) will further shield the Project. The Applicant will leave existing mature vegetation around the perimeter of the Project where possible. This buffer, combined with the setback of the equipment from property lines and public rights of way, will serve to isolate the equipment from surrounding properties. Most adjoining properties are also used for timber or agricultural use. Given the current adjoining uses, the Project will have a minimal viewshed impact to the surrounding neighbors and preserve the rural character of the community.

2.11.2. Sound

There will be no unreasonably loud noises created by the Project and the Applicant has proposed the following two conditions regarding sound:

1. All site activity required for the construction and operation of the solar energy facility shall be limited to the following:

    a. All pile driving activity shall be limited to the hours from the earlier of sunrise or 8 a.m. to the later of 6 p.m. or sunset, Monday through Saturday. Applicant may request permission from the Zoning Administrator to conduct piling driving activity on Sunday, but such permission will be granted or denied at the sole discretion of the Zoning Administrator; and

    b. All other construction activity on site shall be permitted Monday through Sunday in accordance with the provisions of the County’s Noise Ordinance.

2. After completion of construction, the solar energy facility, during normal operation and excluding maintenance shall not produce noise that exceeds 50 dbA as measured at the

property lines of the project boundary, unless the owner of the adjoining affected property has given written agreement to a higher level.

During operations, sound at the Project boundary will not exceed the County requirements in its Noise Ordinance. During the night, there will be no audible noise at the Property line from the Project. The inverters produce a low-level hum, only during daylight hours, when the system is generating energy. This noise level has been described as roughly equivalent to that of a dishwasher. Even in idealized sound-travel conditions, at 100 feet, the sound emitted from this inverter will be reduced to under 50 dBA or the equivalent of a modern refrigerator. As seen in the Special Use Preliminary Site Plan, the design locates the inverters at least 100 feet from the Project boundary. The inverters and the substation transformers are the only components that produce any audible sounds.

2.11.3. Glare

The Project will produce no hazardous glare. Solar panels, by design, absorb as much light as possible, and panels reflect/refract very little light – often less than two percent. This is comparable to reflectivity to water, and significantly less reflective than standard glass.

2.11.4. Property Values

To understand how the Project may affect neighboring property values, the Applicant has commissioned Kirkland Appraisals, LLC to prepare a Property Value Impact Study, which accompanies this application as Attachment 3.10., titled “Property Value Impact Study”. The study includes an exhaustive review of recently completed solar projects, referred to as “matched pairs” and associated property values in the vicinity of those completed solar projects. The conclusion of this study reports the Project will have no impact on the value of adjoining or abutting properties and that the proposed use is in harmony with the area in which it is located. Many of the positive attributes expressed by people living next to similar projects include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, its quietness, and minimal traffic, as further detail in the Property Value Impact Study.

2.11.5. County Resources

Solar is a low-impact land use, with minimal to no impact on the County’s resources. Other forms of development (commercial, residential housing, etc.) would require additional services such as roads, utilities, schools, and law enforcement. This Project will not place any material burden on the County’s resources but will increase the County’s tax base and associated revenues.

2.11.6. Community Engagement

The Applicant has worked diligently to ensure that the public, and in particular, the adjacent property owners, have been well-informed of the plans for the Project. Accompanying this request as Attachment 3.8.3., titled “Adjacent Property Owners and Affidavit”, is list of adjacent property owners with a map depicting the location of each adjacent property owner with respect to the Project. The Applicant has engaged with numerous neighbors adjacent to the project area and will continue to do so throughout the special use permit process. The Applicant first

informed neighbors of the Project in early June of 2021, when the Applicant held a community meeting to present information about the Project and allow opportunities for questions and comments for consideration in the design. County staff and local elected officials were also made aware of the community meeting. Invitations to the community meeting were sent to all neighboring landowners and an advertisement of the community meeting was posted in the Farmville Herald in advance of the meeting. These invitations included the proposed date, time, and location of the meeting, as well as dial in information for community members that did not have access to internet services. The Applicant then held a second community meeting at the Arvonia Volunteer Fire Department in October of 2021. Similar to the first community meeting, County staff, local officials and neighboring landowners were all invited to the meeting, and it was also advertised in the Farmville Herald. During these meetings, the community was able to engage with Apex staff and watch presentations a made by Apex individuals, and learn more about the project through Q&A.

The Applicant will remain in communication with the neighboring landowners in order keep them informed by sending monthly update letters during the special use permitting process, sharing information about the Project's progress, and information about public meetings, to invite neighbors to participate in the learn about the Project design and reach out with any questions or concerns they may have.

The Applicant has engaged with numerous local organizations about the project including, but not limited to, Buckingham County first responders, including EMS and volunteer firefighters, Buckingham County Chamber of Commerce, Buckingham Historical Society, Town of Scottsville, Farm Bureau, Appalachian Voices, Yogaville, Straight Streets, Solar Hands-On Instructional Network of Excellence (SHINE), Bridging the Gap, Sierra Club, Central VA Land Conservancy, Vet to Vet Vehicles, Lover over Crisis, Christ for Christmas, Local Churches, and countless local businesses. Communications with these groups have been inquisitive and friendly and the Applicant plans to maintain active communication with these organizations as well as pursue conversations with other community groups, business leaders and educational institutions in the local community as development progresses.

To strengthen community engagement and accessibility to information, the Applicant has created a Facebook page and a website for the Project (www.riverstonesolar.com). The Project website serves as a landing page for the Buckingham County community to learn more about the Project and provides information for how to become involved in the Project or how to contact the Applicant with any questions, comments, or concerns about the Project. Furthermore, there is a Local Vendor Signup page to allow local contractors to provide their information to be considered for hire during the construction phase of the Project. Solar projects require many common products and services, many of which can be found locally.

The Applicant is a strong supporter of educators, entrepreneurs, and changemakers in the Buckingham County Community. To show our support and strengthen the positive impacts the Project will have on the surrounding community, the Applicant is pleased to have initiated a Community Grant Program with an initial fund of $20,000 for distribution to support organizations focused on promoting education, conservation and sustainability, and public land access. In October of 2021, The Applicant awarded 3 local organizations with distributions from the Community Grant Program, these organizations included:

- **Bridging the Gap in Virginia:** A workforce development Non-profit organization (NPO) focused on solar installation and energy efficiency audit training to men and women.
- **Historic Buckingham, Inc:** A NPO renovating the historic African American Alexander Hill Baptist Church in Buckingham County.
- **Vet to Vet Vehicles:** A NPO active in renovating vehicles and donating them to veterans and first responders in need of reliable transportation in and around Buckingham.

The Applicant is currently advertising it's second round of community grant funding for the 2022 year and is encouraging organizations active within the community to apply for the grant funds through the Project website at www.riverstonesolar.com.The Applicant has tried to be transparent, honest, and engaged with the local community, and will continue to do so throughout the Project's development, by continuing to meet with community groups, business leaders and educational institutions, and by staying in regular contact with adjacent landowners. As the Project will be a fixture in the community for the next 40 years, The Applicant wants to be an active, supportive member of the community, and a good neighbor.

2.12. Comprehensive Plan - Cultural Resources

The Comprehensive Plan includes a goal to recognize and preserve the County's historical and cultural resources for future generations. The Comprehensive Plan notes that identification and evaluation are the primary strategies to reaching this goal. In recognition of the importance of the historical and cultural resources, the Applicant has conducted a desktop survey of known cultural and historic resources utilizing the Virginia Department of Historic Resource's (DHR) Virginia Cultural Resource Information System (VCRIS). The results of the desktop screening accompany this application in Attachment 3.8.5., titled, "Cultural Resource Assessment and Records Check". The primary result of this analysis shows there are no known cultural or historic resources located on the Property.

The Applicant has also conducted visual investigations for cultural resources when visiting the Property and has communicated extensively with the property owner to understand if any known cultural resources, including cemeteries, exist on site. These visual observations and landowner conversations have not resulted in the identification of any cultural or historic resources (including cemeteries) located on the Property.

Additionally, the Applicant has initiated coordination with the Buckingham Historical Society by providing the organization with a map of the Property and associated Buckingham County Tax Map Parcel IDs. To date, this coordination has also not resulted in the identification of any cultural or historic resources located within the Property.

As previously mentioned in Section 2.10, DEQ's PBR process requires solar projects, such as Riverstone Solar, to go through extensive field analysis of archaeological and architectural resources. State law requires the Applicant to obtain a PBR before commencing construction and operations of a solar project. From a cultural resource perspective, the Applicant will be required to perform a Phase 1 Cultural Resources Survey. This analysis includes comprehensive archeological surveys throughout the Property, as well as a survey of architectural resources within a ½ mile buffer of the Property. After confirming presence or absence of cultural resources, the Applicant must evaluate each resource identified for its

potential eligibility for listing in the National Register of Historic Places (NRHP) and assess the potential impact of the Project on each NRHP-eligible resource. Any archaeological or architectural resources identified as eligible or potentially eligible for listing in the NRHP will either be avoided during construction or screened to preserve the viewshed of the resource.

2.13. Comprehensive Plan - Economic Development

The Project is a low-impact land use that will provide Buckingham County with substantial direct and indirect economic benefits with minimal to no impact on the County's resources.

2.13.1. Increased Local Tax Revenue

Specialty Policy Area #7 of the Comprehensive Plan states that "Buckingham County considers 'economic development' high on its list of goals" and also notes the importance of a strong tax base. See Chapter IV, Policy Area #7.

The Project represents an initial capital investment of more than $190 million, with annual operating expenses of approximately $1 million. This is significant private investment and economic development in Buckingham County. Based on information provided by the Commissioner of Revenue's Office, this Project would be the largest machinery and tools tax (or revenue share) taxpayer in the County when operational. Accompanying this request as Attachment 3.9., is a detailed economic benefits report, titled "Economic and Fiscal Contribution to Buckingham County, Virginia," completed in July 2021 by Mangum Economics. As summarized in the report and in Figure 1 below, the Project would make a significantly greater fiscal contribution to Buckingham County than the property currently generates in its current agricultural use. If Buckingham County elects to adopt a Revenue share ordinance, the Applicant estimates that the proposed project would generate approximately:

- $14,800,000 million in direct, cumulative county revenue over the Project's anticipated 40-year operational life.

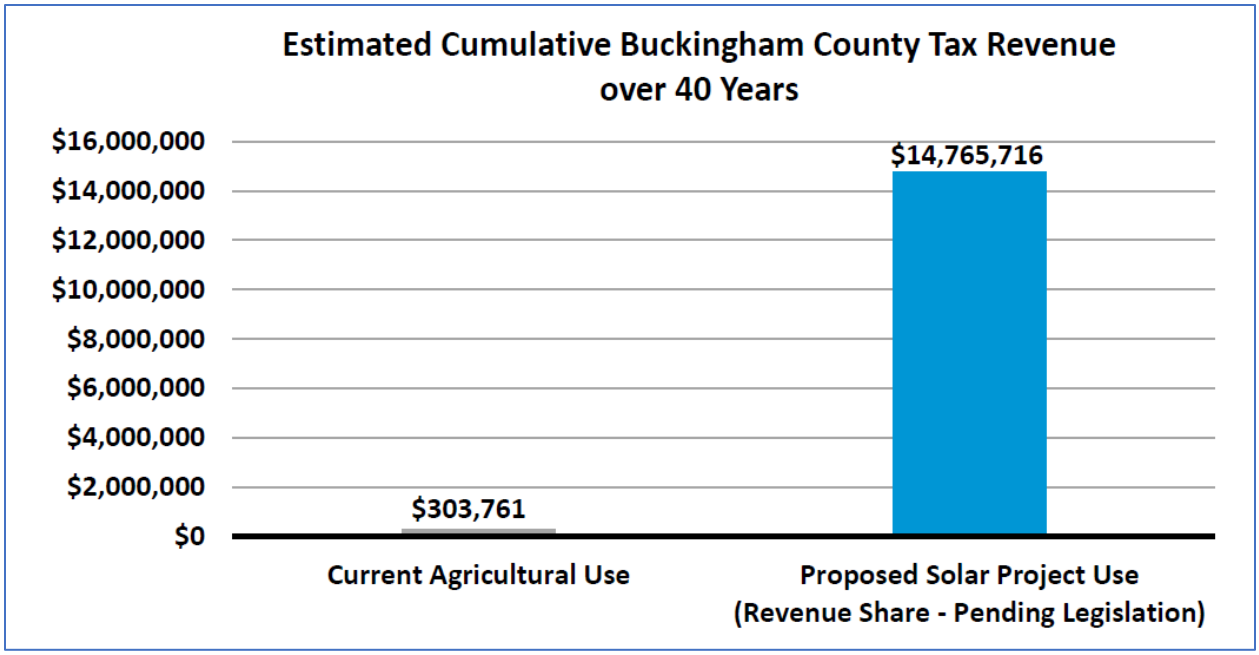


Figure 1: Estimated cumulative Buckingham County tax revenue from the proposed Project as compared to tax revenue currently generated from the property in its current agricultural use.

The Project will provide Buckingham County this surge of local tax revenue without increasing strain on County resources unlike that of other forms of development such as the county services required by commercial development or residential housing. Solar does not require resources such as publicly funded new roads, schools, utilities (water, sewer, etc.), or additional law enforcement or firefighters.

2.13.2. Economic Benefits During Construction

The construction period of the Project will provide an economic surge to the region, both directly and indirectly. The Applicant estimates the one-time pulse of economic activity to Buckingham County would generate $1,900,000 in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction. This one-time pulse of economic activity would also support approximately:

- 482 full-time equivalent construction jobs.
- $24,300,000 in associated labor income.
- $66,700,000 in economic output it in the community

The Virginia solar industry has developed programs and seeks local contractors to maximize the procurement of local and regional products and services such as landscaping, nurseries, excavating and clearing, fencing, general construction, electrical work, and equipment dealers.

Use of local workers will benefit the Project. The Applicant is committed to growing the solar workforce in the Southside Virginia region. In February 2018, a partnership was formed with solar developers, contractors, and a local community college to establish a solar workforce

training initiative. This workforce initiative should maximize the pool of qualified solar workers as the need for workers to build these solar generation projects grows in the region.[1]

In addition to direct benefits to firms and workers from the procurement of their products and services, these firms and workers will spend a portion of the increased income in the local area creating a *local economic multiplier*[2]. This will lead to indirect benefits to businesses such as restaurants, hotels, and other retail stores. In addition, significant increased local income will provide benefits to a broad group of local business owners and provide greater employment.

2.13.3. Economic Benefits after Construction

After construction, the Project will procure services benefiting the local economy such as landscaping, electrical, and other trades. The Project will continue to be a reliable economic pipeline to local suppliers and other retailers. The Project is expected to have an annual operating expense of approximately $1,000,000. The Applicant estimates the economic activity associated with the operation of the Project could support approximately:

- 6 full-time equivalent operation jobs
- $255,564 in associated labor income.
- $725,187 in economic output in the County.

2.13.4. Attract Further Business Investment

Solar Projects may enter into agreements to sell their power to electric utilities (e.g., Appalachian Power and Dominion Virginia Power). Alternatively, the connection to the PJM Interconnection System[3] also provides the opportunity to sell the power to private companies. Recently, demand for renewable energy has grown dramatically, driven in part by companies with sustainability goals. As of today, 221 companies worldwide have committed to powering their operations with 100% renewable electricity.[4] This list of companies includes some of the world's largest, such as data centers (e.g., Amazon, Apple, Facebook, Google, Microsoft), large retailers and service providers (e.g., FedEx, General Motors, Kellogg's, Nike, Sales Force, Starbucks, Walmart,), and financial institutions (e.g., Bank of America, Citi, JP Morgan Chase, Wells Fargo)[5].

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[1] Apex and other founding members have developed a 60- to 80-hour training program using industry-recognized credentials. Program funding of $1,000,000 for the initiative has been secured to date from multiple sources, including the VA Higher Education Equipment Trust Fund (lab); the Tobacco Commission (programmatic technology); the Virginia Community College System (tuition assistance and partnership development); Southside Virginia Community College; private Industry; and other worker training grants that build on private sector involvement.

[2] Moretti, Enrico. Local multipliers American Economic Review: Papers and Proceedings 100 (May 2010): 1–7 http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.2.1

[3] PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. https://www.pjm.com/about-pjm.aspx

[4] http://there100.org/companies

[5] https://rebuyers.org/about/leadership/

Apex Clean Energy has developed strong relationships with many of these potential renewable energy purchasers, and Apex has successfully sold the electricity from multiple projects to large utilities including AEP and sold entire constructed projects to large private companies including IKEA. In many cases, Apex developed, constructed, and now operates the assets for these customers.

Access to solar energy has become an important determinant in siting new businesses and, more specifically, technology businesses. The growth in data centers is driving significant investment in Virginia and creating new high-tech careers. Recently, tech companies such as Facebook, Amazon, Microsoft, Apple have invested tens of billions into Virginia communities. All four of these companies have also contracted to procure their energy from solar projects like Riverstone. In October 2017, Facebook, Microsoft, and Spanish-based Telefonica commissioned a high-speed fiber-optic data cable between Spain and Virginia Beach named MAREA (4,000 miles and 160 terabits of data per second). Telefonica also laid a second cable (BRUSA), which is 6,800 miles in length and connects Virginia Beach to Brazil, with a mid-point branch connection in Puerto Rico. An African-based company called South Atlantic Express is developing an 8,000-mile cable between Virginia Beach and Cape Town, South Africa.

Virginia is uniquely positioned to secure billions of additional dollars' worth of investments in data centers and associated economic activities. A commitment by Buckingham County to embrace projects such as Riverstone Solar may be a key component in attracting technology companies to the region and creating additional employment opportunities.

This Project also supports additional economic development strategies of the Comprehensive Plan. Economic Development, Strategy #3 identifies the need to promote necessary infrastructure to support the development and sustainability of service and retail businesses. As noted above, solar power is a low-cost form of energy and has been shown to attract additional business development. Another objective of the Comprehensive Plan is to "encourage the overall strengthening and diversification of the economic base of the County". As discussed above, this Project will have a significant impact on the tax base without the need for public services.

2.14. Comprehensive Plan - Environment

Solar energy is one of the most environmentally friendly sources of power that will benefit not only the citizens of Buckingham County, but also customers throughout Virginia. Transitioning from fossil fuels to renewable energy has overwhelming positive net benefits for air quality, water resources, climate change, and human health. Solar energy generation produces no carbon pollution, releases no heavy metals or acid gases, and emits no small particles that can cause respiratory problems, unlike other forms of energy generation such as conventional fossil fuel generators.

The Project will not require fuel to operate and therefore will not emit any greenhouse gases as a result of its operation. In fact, because the Project will be generating electricity passively from the sun, it will serve as a powerful tool to decarbonize our nation's energy production. These avoided emissions will result in a substantial carbon offset of 277,709 tons annually. To put that in perspective, the estimated carbon offsets resulting from the Project are equivalent to carbon sequestered by 308,664 acres of U.S. forests every single year.

As previously mentioned in Section 2.9., DEQ's PBR process requires solar projects, such as this Project, to go through extensive field analysis of environmental resources. State law requires the Applicant to obtain a PBR before commencing construction and operations. From an environmental resource perspective, the Applicant will be required to complete a desktop survey analysis to understand what Threatened and Endangered (T&E) species may exist on the Property. If T&E species are present, the applicant will be required to perform additional analysis to confirm presence. The specific analysis will depend greatly on the T&E species present but may include a habitat assessment or a presence absence field survey. The Applicant anticipates little to no risk of T&E species existing on site given the property is used for commercial silviculture and has been logged for many years.

With regards to wildlife, the Applicant has considered more than just T&E species in the Project design. The Applicant is aware of the strong hunting community in the County and is cognizant that the Project may modify wildlife habitat or migration in the immediate vicinity of the Property. To mitigate this impact, The Applicant has incorporated wildlife corridors in the Special Use Preliminary Site Plan. This design feature presents multiple, contiguous corridors throughout the entire project area to allow wildlife to safely pass through the Project during its operational life. The Applicant has provided an exhibit depicting the location of the Projects wildlife corridors in Attachment 3.4., titled "Project Wildlife Corridors".

To show its commitment to the supporting the environment, Apex Clean Energy has partnered with the National Fish and Wildlife Foundation (NFWF) to support conservation programs across the county that provide better habitat for fish and wildlife and benefit local communities in and around the areas where Apex develops its renewable energy projects. This partnership represents the first conservation grant program of its kind in the clean energy industry. In honor of this partnership, the Applicant will be contributing grant funding, in the amount of $149,500 to NFWF once the project becomes operational. As part of our partnership, NFWF will provide federal matching dollars for these funds at the level of at least 1:1, totaling $299,000 to enhance local habitat and conservation in the region of the Project Area. These grants will be offered to County groups and other organizations that may do work within the County.

The Applicant has commissioned Timmons Group to conduct a full-site wetland delineation of the Property. All stream centerlines and associated wetlands were digitally mapped by Timmons Group ecologists while on the Property. The streams and associated wetland data, as well as 100-year floodplain data have been accounted for in the Special Use Preliminary Site Plan accompanying this application. All streams and wetlands will be avoided to the extent practicable, except where a stream crossing may be necessary for an internal access road. The Project has been thoughtfully designed to minimize stream and wetland impacts by incorporating entrances to the Property and minimizing the number of interior roads. This design feature provides necessary access to the entire site while keeping stream crossings to a minimum.

State and regional regulations regulate water flow/runoff during both construction and operations. The post construction development must exceed what existed prior to construction. Prior to construction, the following two processes will govern the Project's water management:

1. The Soil and Water Conservation District will review, approve, and oversee the Project's soil and erosion control plan

2. DEQ will review the Project's stormwater management.

Both agencies will issue permits with stipulated conditions that will mitigate any potential water management issues during both construction and operations.

Once the projects use life has concluded, the Project will be decommissioned, and the Property will be returned to its original form. This process will require the Applicant to dismantle the facility and find a new home for the various components that make up the project. A large majority of these components can be reused or recycled. By and large, the most abundant component making up the Project will be solar panels. Most of the material used to build a solar panel is glass, aluminum, and copper. There are numerous companies located in the United States that specialize in the deconstruction and recycling of solar panel materials. The second most abundant component making up the project will be the steel racking infrastructure on which the panels are mounted to. Steel is a highly valuable material that can be easily recycled and converted to raw material for a new alternative use. The opportunity to reuse or recycle components from the Project further strengthens the case for sustainability offered by the land change in land use.

Finally, the Community Facilities and Services section of the Comprehensive Plan includes an objective to "provide adequate public utilities to support current and future growth (of all types) in Buckingham County." This Project will supplement the mix of power generated for the residents of the County.

2.15. Comprehensive Plan - Fire and Rescue, Law Enforcement

The Project would not pose increased security or safety risks. Once the Project is constructed, a permanent perimeter/boundary fence will surround the entire Project. The fence will be posted with security signage and will be metal chain-link fence with a minimum height of six (6) feet and topped with one (1) foot of barbed wire. The Project will be monitored remotely on a 24/7 basis to ensure the Project is operating properly. If any emergency arises, it will be noted by the remote operator who will contact and coordinate with the appropriate local emergency and security personnel and will be able to remotely de-energize the Project. Existing County fire fighting services and equipment are suitable to handle any issues that may arise at the Project, and training will be provided to local emergency services on how to access the Project in case of emergency. As noted, the Project anticipates having multiple access points from surrounding roads and the internal access road layout will allow easy access to all parts of the Project's interior. The existing dirt roads will be used to the extent feasible but new 14' wide gravel internal drives will be constructed to optimize panel layout and site circulation. The proposed access points will require upgrades to accommodate the Project's anticipated low-volume commercial traffic. Minimal to no impact on local law enforcement is anticipated.

Although it is unlikely that emergency services would be needed at this Project, the Applicant has committed to provide, at the Applicant's expense, materials, education, and training on how to respond to an emergency at the Project. See the Applicant's proposed conditions included with the application.

2.16. Comprehensive Plan - Housing

This Project has been sited away from housing and other residential development. This Project is located outside of areas that are designated for residential growth and is not anticipated to have any effect on the housing stock in the County.

An independent third-party analysis accompanying this application as Attachment 3.10., titled "Property Value Impact Study", confirms that this Project will not have any impacts on surrounding property values.

2.17. Comprehensive Plan - Libraries

The Project will not impact established libraries or the County's future plans regarding libraries.

2.18. Comprehensive Plan - Parks and Open Spaces

Since the Project is located on land used primarily for timber resources the Project will not impact established parks or open spaces within Buckingham County. As noted in the environmental section above, delineated streams, wetlands, and setbacks will be preserved as open space. The Comprehensive Plan does not identify this area of the County for recreation or parks.

2.19. Comprehensive Plan - Potable Water & Sewage

Because this Project is located in a remote area and outside high growth areas, the Comprehensive Plan does not depict plans to extend public water or sewer lines into the proposed Property. Based on the Future Land Use Map in the Comprehensive Plan, the Property is expected to remain rural and growth is anticipated to be slow. The Project will not require any buildings with associated plumbing or septic fields and therefore sewage was not included as a consideration in this Project.

2.20. Comprehensive Plan - Schools

The Project will not impact established schools or the County's future plans regarding schools and other educational facilities. As noted above, Apex Clean Energy was a founding member of the plan to develop workforce training at Southside Community College.

2.21. Comprehensive Plan – Telecommunications

The expansion of telecommunications services is a key element of the Comprehensive Plan. Broadband deployment is a point of emphasis but also funded largely by state and federal grants. Other Virginia counties have recognized a link between solar development and the deployment of broadband. In those counties, the revenue generated by solar facilities have been used to expand telecommunications and broadband facilities. While the revenues could be used in the County's discretion to support upgrades, this Project is not expected to have an impact on the existing telecommunications infrastructure in the County.

2.22. Comprehensive Plan - Transportation

The Comprehensive Plan notes that land use and transportation are linked (See Special Policy Area #4). The Project will be developed with close coordination and approvals by the Virginia Department of Transportation (VDOT) to ensure that construction and operations traffic does not negatively impact the safety of adjoining public roads and all entrances abide by VDOT standards. The Applicant has prepared a Traffic Statement to accompany this request and will also prepare a Construction Traffic Management Plan prior to the start of construction as stated in the Proposed SUP Conditions.

As seen on the Special Use Preliminary Site Plan and Discussed in the Traffic Statement, the Applicant is proposing three (3) Construction and Operations and Maintenance (O&M) entrances off Route 652 (Bridgeport Rd) and two (2) Construction and O&M entrances off Route 679 (Paynes Pond Rd). The project also proposes one (1) O&M entrance off Georgia Creek Rd however, use of Georgia Creek Rd entrance during construction of the facility will be prohibited. To allow for access to the western portion of the project area during construction, the applicant proposes to install a Temporary Construction Bridge that will span Little Georgia Creek on the southern side of the Project Area. The location of the Temporary Construction Bridge can be observed on the Special Use Preliminary Site Plan. Once construction is complete, the Applicant proposes to remove the Temporary Construction Bridge and utilize the O&M entrances from Georgia Creek Rd to access the western portion of the Project during the Operations phase of the Project. During the operations phase, the Applicant anticipates a negligible impact consisting of 1-2 trips a month for maintenance, typically with pick-up trucks for landscaping activities. The proposed points of access have been specifically selected to mitigate potential impacts to roads used by other residents of the County and to limit stream crossings of internal access roads. These locations make use of existing access points.

During the operations phase, the Applicant anticipates a negligible impact consisting of 1-2 trips a month for maintenance, typically with pick-up trucks for landscaping activities. Further detail regarding transportation can be observed in the Traffic Statement that accompanies this application in Attachment 3.11.

It will not require regular staff and will only be visited as needed for maintenance of the system or landscaping. No impact on local traffic is expected from the day-to-day operations of this Project.

The Applicant has proposed specific limitations to mitigate construction traffic and construction parking:

1. A Construction Traffic Management Plan and mitigation measures shall be developed by the Applicant and submitted to the Virginia Department of Transportation (VDOT) and Buckingham County for review. The Plan shall address traffic control measures, an industry standard pre- and post-construction road evaluation, and any necessary localized repairs (i.e. potholes, wash-boarding of gravel, shoulder rutting, culvert crushing, etc.) to the public roads that are required as a result of damage from the Project. If a traffic issue arises during the construction of the Project, the Applicant shall develop with input from the County and VDOT appropriate measures to mitigate the issue.

2. Parking of vehicles or staging of equipment or materials related to the Project shall be limited to the Project Area.

2.23. Comprehensive Plan - Solid Waste

At the end of its useful life, the Project will be decommissioned in accordance with the County requirements. Section 2.8 of this narrative and the sample decommissioning plan attached to this narrative. To the extent possible, the Applicant will use all reasonable efforts to recycle the equipment and materials.

3. Attachments

3.1. Proposed Special Use Permit Conditions

The Buckingham County Board of Supervisors approves the Special Use Permit ("SUP") for Riverstone Solar, LLC to construct, maintain, and operate a 149.5 MW_{AC} solar energy facility ("Project") subject to the following conditions.

1. Riverstone Solar, LLC or any successors, assignees, current or future lessee, sub-lessee, or owner of the solar energy facility (the "Applicant") consent to annual administrative inspections by Planning Department Staff for verification of compliance with the requirements of this SUP after the completion of the construction of the Project. During construction of the Project, the County and its assigns and designees shall have access to the site for inspections and to assure compliance with the conditions of the SUP.

2. The Applicant shall sign the list of the adopted conditions for this SUP signifying acceptance and intent to comply with these conditions.

3. That all federal, state, and local laws, regulations, permit requirements and ordinances will be adhered to including but not limited to:

a. All active solar systems and solar equipment used in this Project shall meet the requirements of the National Electrical Code (NEC), National Electrical Safety Code (NESC), American Society of Civil Engineers (ASCE), American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), or International Electrotechnical Commission (IEC) as applicable and comply with state building code and shall be inspected by a county building inspector through the building permit process.

b. An Erosion and Sediment Control Plan must be submitted to the County and approved by the Soil and Water Conservation District prior to any land disturbance.

c. The erosion and sediment control plan shall be prepared in accordance with the Virginia Erosion and Sediment Control Handbook. As an additional precaution, the erosion and sediment control plan will be implemented as a sequential progression, demonstrating that not more than 25% of the Project Area be disturbed at any one time during construction without temporary seeding or other stabilization in accordance with the Virginia Erosion and Sediment Control Handbook. Nothing in this condition shall prevent continued construction activities after areas have been stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, and such stabilized areas will not be subject to the 25% limitation in sentence 2 of this condition. The erosion and sediment control plan will provide the means and measures in accordance with the Virginia Erosion and Sediment Control Handbook to achieve stabilization of the disturbed areas and to comply with this condition.

d. A Stormwater Management Plan must be submitted to the Virginia Department of Environmental Quality (VDEQ) and approved by VDEQ prior to any land disturbance.

e. The Project shall fully comply with all applicable provisions of the Buckingham County Zoning Ordinance, to the extent not modified herein, throughout the life of this SUP.

4. That the building permit application must be submitted within 2 years of obtaining the Special Use Permit and the commercial generation of solar electricity shall begin within 18 months of the approval of the building permit or this SUP shall be null and void. The building permit deadline will be extended for 12 months (3 years total), and the construction time period extended by 12 months (30 months total) by administrative approval of the County Administrator after consultation with the Board of Supervisors due to delays in state permits, interconnection approval, or other good cause demonstrated by the Applicant.

Any timeframe under which the Commonwealth is under an Executive Order of the Governor declaring a statewide emergency will toll the timeframe specified in this condition.

5. All racking, solar modules, inverters, breakers, switches, cabling, communications components, and other ancillary components necessary to convert solar energy to electricity and interconnect to the electrical transmission are considered "Solar Equipment" and subject to the requirements for such, together with setback requirements of that district and other requirements, unless otherwise stated in these conditions. Solar Equipment shall not include access roads and transmission lines and poles. "Project Area" shall include all areas within the Property line boundary that include, but not limited to the following: Solar Equipment, ingress/egress, access roads, fencing, parking, laydown areas, setbacks, buffers, storage area, wetlands, erosion and sediment control features, storm water management features, and other ancillary components. Battery storage and other energy storage methods are not approved as part of this SUP and will require separate special use permitting.

6. This SUP shall be binding on the Applicant or any successors, assignees, current of future lessee, sub-lessee, or owner of the solar energy facility.

7. The construction of the Project shall be in substantial conformance with these conditions and in general conformance with the Special Use Preliminary Site Plan prepared by Apex Clean Energy dated January 12, 2022 (the "General Plan"). The Solar Equipment and accompanying storm water features shall be limited to no more than the 1,765 acres of the 1,996-acre Property as shown on the General Plan. Modifications to the General Plan shall be permitted at the time of building permit based on state and federal approvals and final engineering and design requirements that comply with these conditions.

8. All site activity required for the construction and operation of the solar energy facility shall be limited to the following:

a. All pile driving activity shall be limited to the hours from the earlier of sunrise or 8 a.m. to the later of 6 p.m. or sunset, Monday through Saturday. Applicant may request permission from the Zoning Administrator to conduct piling driving activity on Sunday, but such permission will be granted or denied at the sole discretion of the Zoning Administrator; and

b. All other construction activity within the Project Area shall be permitted Monday through Sunday in accordance with the provisions of the County's Noise Ordinance.

9. After completion of construction, the solar energy facility, during normal operation, but excluding maintenance, shall not produce noise that exceeds 50 dbA as measured at the property lines of the project boundary, unless the owner of the adjoining affected property has given written agreement to a higher level.

10. a. A minimum three hundred (300) foot setback shall be maintained from Solar Equipment to any adjoining or adjacent residential dwellings that exist at the time of the approval by the Board of Supervisors. This requirement may be reduced or waived for the life of the solar energy facility, if agreed to, in writing, by the owner of the residence. Transmission lines and poles, security fence, and project roads may be located within the setbacks only where necessary. During construction, the setback may be used for the staging of materials and parking if the buffer is not disturbed. This requirement is intended to be in addition to the fifty (50) foot setback established from Solar Equipment to the property line such that all Solar Equipment will be no less than 350 feet from any adjoining or adjacent residential dwelling that exists at the time of the approval by the Board of Supervisors. Within the 350 foot buffer, the

Applicant shall retain at least a three hundred fifty (350) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the property line.

11. a. A minimum of a fifty (50) foot setback from Solar Equipment to the property line and any public rights of way shall be provided around the perimeter of the Solar Equipment where it is adjacent to property not owned by the same property owner as covered in the SUP at the time of the approval by the Board of Supervisors. Within the fifty (50) foot setback, the Applicant shall retain at least a fifty (50) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the property line. Transmission Lines and poles, security fence, and project roads may be located within the setbacks only where necessary.

b. The Applicant will maintain all buffer areas with the advice and support of a professional arborist or forester for the duration of the project's operational life. Such maintenance may include thinning, trimming, seeding or other modifications to the buffer to ensure the health of the vegetated buffer areas, public safety, and the energy efficiency of the Project. In the event the health of the vegetation within the buffer area is compromised and no longer substantially obscures from view the Solar Equipment and security fence, the Applicant will plant a new buffer or supplement the remaining buffer, including timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist or Forrester.

12. a. Along existing public right-of-way (ROW) where there is existing timber, the Applicant shall retain at least a fifty (50) foot buffer of existing vegetation and timber with the intent to substantially obscure from view the Solar Equipment and security fence from the public right-of-way. Along existing public rights-of-way where there is not at least 50' of vegetation and timber remaining to substantially obscure from view the Solar Equipment and security fence, the Applicant will create a buffer of at least fifty (50) feet. The new buffer will include timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist and subject to the prior written approval of the Zoning Administrator prior to the issuance of a building permit. All plantings installed in the buffer shall have an anticipated five-year height of six (6) to eight (8) feet after planting and an anticipated mature height of at least twenty (20) feet. Any new plantings shall be planted during the appropriate time of year after the completion of construction of the Project. The buffer may be included in the setback area.

b. The Applicant will maintain all buffer areas with the advice and support of a professional arborist or forester for the duration of the Project's operational life. Such maintenance may include thinning, trimming, seeding or other modifications to the buffer to ensure the health of the vegetated buffer areas, public safety, and the energy efficiency of the Project. In the event the health of the vegetation within the buffer area is compromised and no longer substantially obscures the visibility of the Solar Equipment and security fence, the Applicant will plant a new buffer, or supplement the remaining buffer, including timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist or forester.

c. A performance bond reflecting the estimated costs of anticipated landscaping maintenance, as determined by the Applicant with the advice of a professional arborist or forester, shall be posted by the Applicant prior to construction. This ensures buffer landscaping is adequately maintained for the life of the Project.

13. The Applicant shall install a security fence around the Solar Equipment that is a minimum six (6) feet in height. Fencing must be installed on the interior of the vegetative buffer required in this section so that it is screened from the ground level view of adjacent property owners. The fencing shall be always maintained while the facility is in operation.

14. Construction lighting shall be minimized and shall be directed downward. Post-construction lighting shall be limited to security lighting only and shall be full cut-off lighting pointed in a down direction.

15. The Project shall not receive a building permit until evidence has been given to Buckingham County that the electric utility company has a signed an interim interconnection service agreement or interconnection service agreement with the permittee.

16. If the solar energy facility is inactive completely or substantially discontinuing the delivery of electricity to an electrical grid) for a continuous twelve (12) month period it shall be considered abandoned. The Applicant shall provide notice to County Administrator immediately upon the Project becoming abandoned, inactive and/or shutting down operation. The Applicant or its successor and/or assign ("Project Owner") shall decommission the Project within twelve (12) months abandonment, inactivity, or substantially discontinuing the delivery of electricity to an electrical grid, whichever occurs first. The decommissioning shall be in accordance with a Decommissioning Agreement between the Applicant, Project Owner and the County. If the Project (or relevant part) is not removed within the specified time, the County may cause the removal of the Project with costs being borne by the Project Owner as will be provided for in the approved Decommissioning Agreement. The costs of decommissioning shall be secured by an adequate surety in a form agreed to by the County Attorney, including but not limited to a bond, letter of credit, cash, or a parent guarantee by an investment grade entity. The cost estimate of the decommissioning shall be updated by the Applicant every five (5) years and be provided to the County. At its option, the County may require the surety amount be increased based on the new cost of decommissioning. The Decommissioning Agreement shall be agreed upon and the surety shall be provided before the issuance of the building permit.

17. The Project shall be decommissioned within twelve (12) months. The decommissioning shall require (i) the removal of any Project facilities installed or constructed thereupon, (ii) the filling in and compacting of all trenches or other borings or excavations made in association with the Project and (iii) the removal of all debris caused by the Project from the surface and 36” below the surface of the Property.

18. The Applicant shall coordinate with the County's emergency services staff to provide materials, education, and/or training to the departments serving the solar energy facility regarding how to safely respond to on-site emergencies.

19. Access roads are to be marked by the Applicant with identifying signage. The manufacturers' or installers' identification and appropriate warning signage shall be posted on or near the panels in a clearly visible manner. The signage must identify the owner and provide a 24-hour emergency contact phone number. Each access gate must also have the signage that identifies the owner and provides a 24-houremergency contact phone number.

20. A Construction Traffic Management Plan and mitigation measures shall be developed by the Applicant and submitted to the Virginia Department of Transportation (VDOT) and Buckingham County for review. The Plan shall address traffic control measures, an industry standard pre- and post-construction road evaluation, and any necessary localized repairs (i.e., potholes, wash-boarding of gravel, shoulder rutting, culvert crushing, etc.) to the public road that are required as a result of damage from the Project. The Applicant will take all reasonable precautions to minimize impact and damage to public roads including regular maintenance, washing and sweeping. If a traffic issue arises during the

construction of the Project, the Applicant shall immediately develop with input from the County and VDOT and implement appropriate measures to mitigate the issue.

21. Parking of vehicles or staging of equipment or materials related construction or decommissioning of the Project shall be limited to the Project Area.

22. All panels will use anti reflective coatings. Exterior surfaces of the collectors and related equipment shall have a non-reflective finish and solar panels shall be designed and installed to limit glare to a degree that no after image would occur, towards vehicular traffic and any adjacent building.

23. No aspect of the Solar Equipment shall exceed 17 feet in height, as measured from grade at the base of the structure to its highest point. Such height restriction shall not apply to electrical distribution facilities, substations, or transmission lines.

24. Nothing in this SUP shall be deemed to obligate the County to acquire any interest in property, to construct, maintain or operate any facility or to grant any permits or approvals except as may be directly related hereto.

25. If any one or more of the conditions is declared void for any reason whatever, such decision shall not affect the remaining portion of the permit, which shall remain in full force and effect, and for this purpose, the provisions of this are hereby declared to be severable.

26. That any infraction of the above-mentioned conditions could lead to a stop order and discontinuation or revocation of the special use permit in accordance with Virginia law.

27. The Applicant will be restricted from using Paynes Road, Georgia Creek Road, Quail Run Lane and the portion of Paynes Pond Road from the intersection of Route 20 to the northern boundary of the Project Area for access to the Project Area during the construction and decommissioning phases of the Project. The Applicant will be restricted from using Paynes Road and Quail Run Lane during the operations and maintenance phases of the Project.

28. The Applicant will be restricted from utilizing photovoltaic panels with internal components containing cadmium telluride. Only silicon type panels, or those other panels that have been established as optimal standard best practice shall be utilized by the Applicant.

29. The Applicant will consider implementation of Pollinator Habitats where appropriate and in accordance with applicable laws and regulations.

3.2. The Property

Riverstone Solar
Buckingham County, VA
Property

Project Boundary (Surveyed)

Parcel Line

3
Weyerhaeuser Company
Parcel ID: 17-13
Zoning: A-1
Land Use: AGRICULTURAL LAND

2
Weyerhaeuser Company
Parcel ID: 17-9
Zoning: A-1
Land Use: AGRICULTURAL LAND

4
Weyerhaeuser Company
Parcel ID: 18-2
Zoning: A-1
Land Use: AGRICULTURAL LAND

1
Weyerhaeuser Company
Parcel ID: 17-8
Zoning: A-1
Land Use: AGRICULTURAL LAND

4
Weyerhaeuser Company
Parcel ID: 18-2
Zoning: A-1
Land Use: AGRICULTURAL LAND

Paynes Pond Rd
Little George Creek
Paynes Rd
Forest Pass
Forest Rd
Georgia Creek Rd
Beaver Pl
Blue Heron Ln
Hardware Rd
VA-695
Quail Run Ln
Little George Creek
Bridgeport Rd
652
Paynes Mill
Diana Mill Rd
Taggart
Noble Ln

0 0.2 0.4 0.8 Kilometers
0 0.125 0.25 0.5 Miles

Date: 7/30/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

Map ID	Parcel ID	Landowner Name	Zoning	Land Use Code	Land Use
1	17-8	Weyerhaeuser Company	A-1	430	AGRICULTURAL LAND
2	17-9	Weyerhaeuser Company	A-1	430	AGRICULTURAL LAND
3	17-13	Weyerhaeuser Company	A-1	430	AGRICULTURAL LAND
4	18-2	Weyerhaeuser Company	A-1	430	AGRICULTURAL LAND

3.3. Special Use Preliminary Site Plan

SPECIAL USE PRELIMINARY SITE PLAN

APEX CLEAN ENERGY

#	REVISIONS	DATE	BY
1	PRELIMINARY	1/12/22	RY

LINE-TYPE LEGEND

- PROJECT LIMITS - 1,996 ACRES
- MAXIMUM EXTENTS - 1,765 ACRES
- FENCE - 952 ACRES
- FLOODPLAIN
- SURVEYED STREAM
- MAIN ROAD
- UNPAVED/BACK ROAD
- AEP 138kV TRANSMISSION LINE (OHE)
- PROPOSED TRANSMISSION LINE (OHE)
- VEGETATION BUFFER
- TEMPORARY CONSTRUCTION BRIDGE

- COLLECTION ROUTE 1
- COLLECTION ROUTE 2
- COLLECTION ROUTE 3
- COLLECTION ROUTE 4
- COLLECTION ROUTE 5
- COLLECTION ROUTE 6
- COLLECTION ROUTE 7

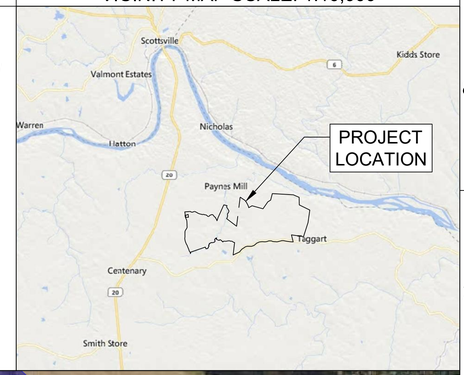
SYSTEM SUMMARY

LATITUDE	°	37.7284564
LONGITUDE	°	-78.45165861
AC (GRID LIMIT)	kWATTS	149,500
GENERATION	MWH	355,496

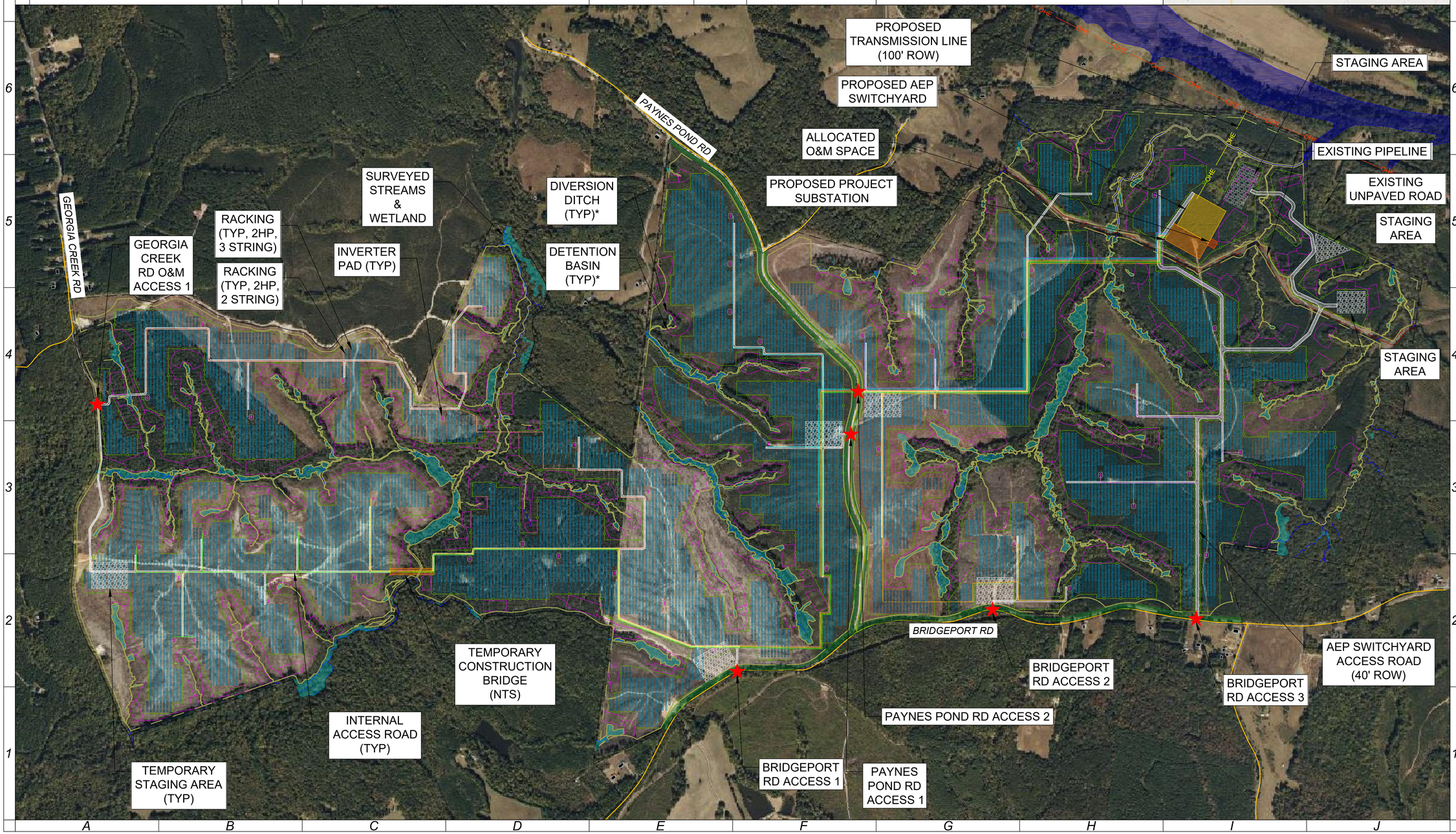
NOTES

1. *Vegetation buffer to exist along the ROW between the development envelope and project boundary. Mature timber will be left in place along the ROW and screening will be added where vegetation does not currently exist.*
2. *Wetland and screening areas will be conserved open space.*
3. *Lighting will be included at the proposed project substation location per requirements. No other permanent lighting will be present on site.*
4. **Location and sizing of stormwater management features is subject to change.*
5. *All solar facilities are located outside of flood plain.*
6. *There are no known historical sites or grave sites within the project area. If areas are identified, they will be avoided during construction.*
7. *Continuous routes through the project area to exist for wildlife corridors.*

VICINITY MAP SCALE: 1:10,000



PRELIMINARY NOT FOR CONSTRUCTION



N
W E
S

0 600' 1200'

SCALE: 1" = 600'

CONSULTANT

APEX CLEAN ENERGY

310 4th St. NE, Suite 200
CHARLOTTESVILLE, VA 22902

OWNER & PROJECT NAME

RIVERSTONE SOLAR, LLC - RIVERSTONE SOLAR PROJECT

Buckingham County, VA
LAT: 37.728456°
LONG: -78.451659°

DATE:	1/12/22
DRAWN BY:	RY
CHECKED BY:	GDAS

SPECIAL USE PRELIMINARY SITE PLAN

A-001

3.4. Project Wildlife Corridors

Riverstone Solar

Buckingham County, VA

Site Plan

- Wildlife Corridor
- Vegetation Buffer Edge
- Project Boundary (Surveyed)
- Fence Line
- Existing Road

SR 720
SR 784
SR 762
SR 679
SR 719
SR 652
SR 611
SR 652

0 0.175 0.35 0.7 Kilometers
0 0.125 0.25 0.5 Miles

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CONFIDENTIAL

APEX CLEAN ENERGY

3.5. Property Slope and Topography

Riverstone Solar

Buckingham County, VA
Slope and Topography

Project Boundary (Surveyed)

Slope

- <15°
- 15 - 25°
- >25°

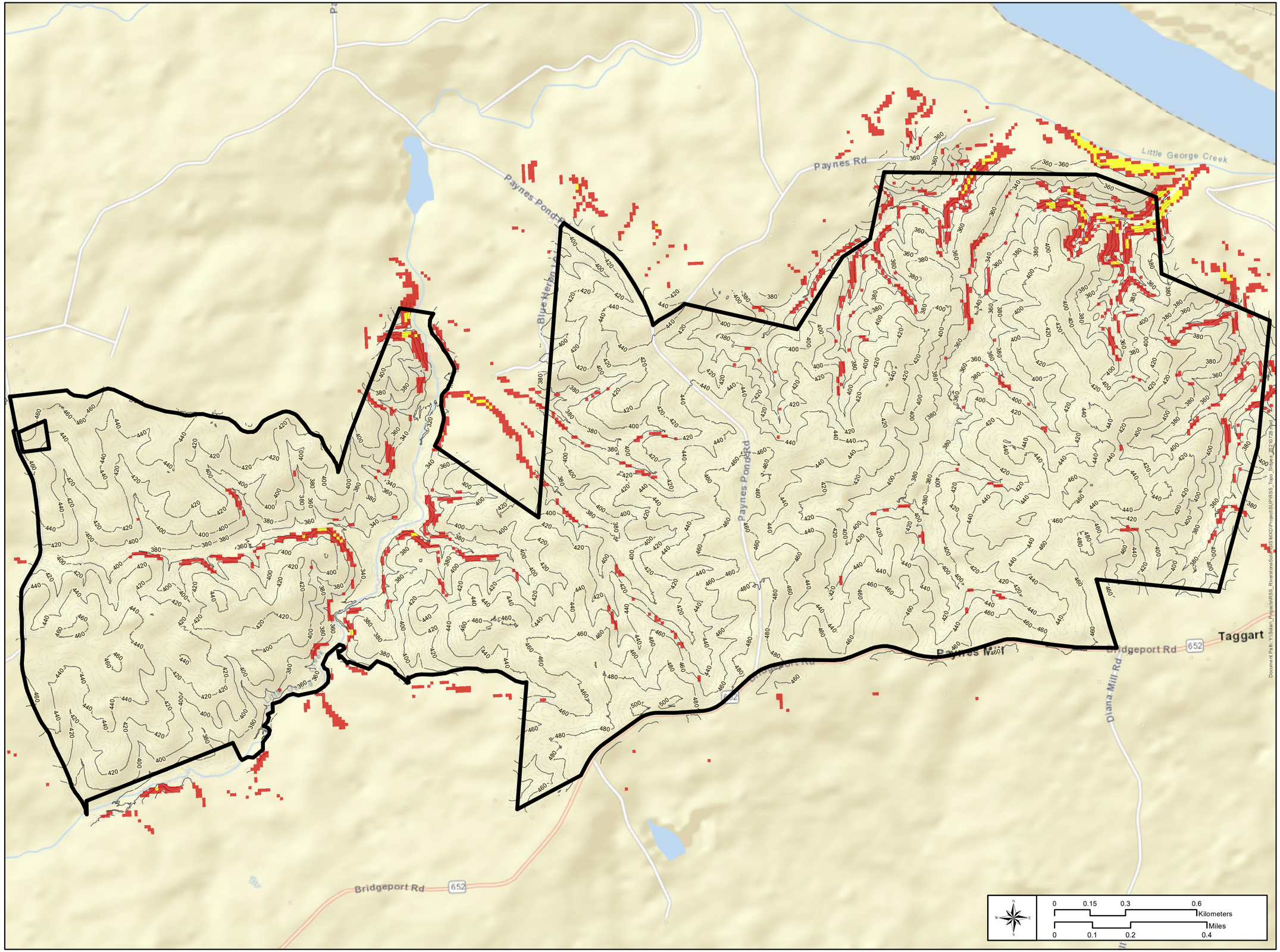
Contour

- 5ft
- 20ft

Date: 7/29/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY



3.6. Easements and Encumbrances

Riverstone Solar

Buckingham County, VA
Roads, Easements & Encumbrances

- Project Boundary (Surveyed)
- Right of Way
- Easement
- Existing Road

Date: 7/30/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

SR 720 / Georgia Creek Road

30' Width

SR 762 / Hummingbird Road

30' Width

50' Width

SR 652 / Bridge Port Road

SR 784 30' Width ROW

SR 679 / Paynes Pond Road 30' Width ROW

Transmission Line 100' Width Easement

Gas Line 50' Width Easement

Private Road 40' Width ROW

AEP Access Road 40' Width ROW

SR 652 / Bridge Port Road 40' Width ROW

SR 719

Paynes Mill

Taggart

Quail Run Ln

Little George Creek

Paynes Rd

Bridgeport Rd

Noble Ln

0 0.175 0.35 0.7 Kilometers
0 0.125 0.25 0.5 Miles

3.7. Existing and Proposed Utilities

Riverstone Solar

Buckingham County, VA
Existing & Proposed Utilities

- Project Boundary (Surveyed)
- Bremo Bluff to Scottsville Line (138kV)
- Existing Road
- Proposed Substation
- Proposed Switchyard
- Proposed Easement: Gentie Line
- Existing Easement: Gas Line
- Existing Easement: Transmission Line (138kV)

Date: 8/2/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

Bremo Bluff to Scottsville 138 kV
SR 720
SR 784
SR 762
SR 679
SR 719
SR 652
SR 611
SR 652

0 0.2 0.4 0.8 Kilometers
0 0.125 0.25 0.5 Miles

3.8. County Special Use Permit Application and Forms

3.8.1. Application for Special Use Permit Checklist

SPECIAL USE PERMIT APPLICATION CHECKLIST

BUCKINGHAM COUNTY OFFICE OF ZONING AND PLANNING MINUMUM SUBMISSION REQUIREMENTS

The following table lists the information necessary to review a special use application. All items are required, unless otherwise stated, and must be submitted in order for the application to be accepted for review. This completed checklist must be submitted with the application.

Adjacent Property Owners List and Affidavit (pages 4, 5 & 6 attached). This list can be obtained from the Clerk of Courts Office: YES NO

Completed application for special use permit (page 3 attached). If not signed by the owner, a Power of Attorney must accompany the application: YES NO

Interest Disclosure Affidavit (page 7 attached). Must be signed by the owner: YES NO
- This form is not required, per the approval of EM Wright, Buckingahm CountyAttorney

Power of Attorney (page 10 attached). Required if anyone other than the owner is signing the application form or proffer statement on behalf of the owner: YES NO
- This form is not required, per the approval of EM Wright, Buckingahm CountyAttorney

Written Narrative (page 11 guidance in preparing the Written Narrative): YES NO

Fees: YES NO

Deed: YES NO

Plat (15 copies). The plat information may be incorporated into the Special Use Permit General Site Plan, in which case, copies of a separate plat are not required. The plat must be prepared by a certified land surveyor or licensed civil engineer and contain the following:

A. Bearings and distances of a scale of 1" = 100' or less for all property lines and existing and proposed zoning lines: YES NO
B. Area of land proposed for consideration, in square feet or acres: YES NO
C. Scale and north point: YES NO
D. Names of boundary roads or streets and widths of existing right-of-ways: YES NO

Tax Map (15 copies). Identify property that special use is being considered for and identify by name all adjacent landowners.

Special Use General Site Plan (15 copies) The General Site Plan must contain the following:

1. Vicinity Map – Please show scale: YES NO N/A
2. Owner and Project Name: YES NO N/A
3. Parcel Identification numbers, name, present zoning, and zoning and use of all abutting or adjoining parcels: YES NO N/A
4. Property lines of existing and proposed zoning district lines: YES NO N/A
5. Area of land proposed for consideration, in square feet or acres: YES NO N/A
6. Scale and north point: YES NO N/A
7. Names of boundary roads or streets and widths of existing right-of-ways: YES NO N/A
8. Easements and encumbrances, if present on the property: YES NO N/A
9. Topography indicated by contour lines: YES NO N/A
10. Areas having slopes of 15% to 25% and areas having slopes of 25% or greater clearly indicated by separate shading devices (or written indication of "no areas having slopes of 15% to 25% or greater"): YES NO N/A
11. Water Courses to include the approximate location of the 100 year floodplain (if applicable) based on FEMA maps (or written indication of "not in floodplain"): YES NO N/A
12. Delineation of existing mature tree lines or written indication of "no mature tree lines": YES NO N/A
13. Proposed roads with right-of-way width that will connect with or pass through the subject property: YES NO N/A
14. General locations of major access points to existing streets: YES NO N/A
15. List of the proposed density for each dwelling unit type, and/or intensity of each non-residential use: YES NO N/A *- No buildings are proposed.*
16. Location of any open space and buffer areas, woodland conservation areas, storm water management facilities, and community and public facilities: YES NO N/A
17. Location of existing and proposed utilities, above or underground: YES NO N/A
18. Vehicular and pedestrian circulation plan, including traffic counts and typical street sections, right-of-way improvements, access points, travel ways, parking, loading, stacking, sidewalks, and trails: YES NO N/A
19. Layouts and orientation of buildings and improvements, building use, height, setbacks from property lines and restriction lines: YES NO N/A
20. Location and design of screening and landscaping: YES NO N/A
21. Building architecture: YES NO N/A
22. Site lighting proposed: YES NO N/A
23. Area of land disturbance in square feet and acres: YES NO N/A
24. Erosion and Sediment Control Plan submitted (10,000 square feet or more): YES NO N/A - Applicant to submit to County prior to receipt of Building permit, per condition.
25. Historical sites or gravesites on general site plan: YES NO N/A
26. Show impact of development of historical or gravesite areas: YES NO N/A
27. A copy of the current status of all real estate taxes of all property owned in Buckingham County. If real estate taxes are not current, an explanation in writing and signed by the owner shall accompany this application. Any liens or other judgments against property shall also be explained in writing and signed by the owner: YES NO N/A

3.8.2. Application for Special Use Permit

APPLICATION FOR A SPECIAL USE PERMIT

CASE NUMBER: _____
(Case Number Assigned by Zoning Administrator)

DATE OF APPLICATION: January 12, 2022

Special Use Permit Request: Riverstone Solar, LLC (the "Applicant" or "Riverstone"), requests a Special Use Permit ("SUP") to allow the construction and operation of a 149.5 MWac utility scale solar facility (the "Project") on approximately 1,996 acres of private land in northern Buckingham County (the "Property").

Purpose of Special Use Permit: The Applicant requests a SUP to allow the construction and operation of the Project on the Property. The Applicant proposes to install solar photovoltaic (PV) modules to produce up to 149.5 MWac. The power generated will be linked to the electrical transmission grid via the existing 138 kV overhead high voltage transmission line adjacent to the property.

Zoning District: District 1 – Agricultural (A-1) Number of Acres: 1,996 +/-

1. Tax Map Section: 17, Parcel: 8, Magisterial Dist.: Slate River
   Lot Description: PARCEL NUMBER 17-8, RT 652-720 - 7 MI S OFSCOTTSVILLE, 520.185 AC
2. Tax Map Section: 17, Parcel: 9, Magisterial Dist.: Slate River
   Lot Description: PARCEL NUMBER 17-9, RT 720 - 2 MI N OF CENTENARY, 97.4 AC
3. Tax Map Section: 17, Parcel: 13, Magisterial Dist.: Slate River
   Lot Description: PARCEL NUMBER 17-13, OFF RT 652 - 7 MI S OF SCOTTSVILLE, 59.5 AC
4. Tax Map Section: 18, Parcel: 2, Magisterial Dist.: Slate River
   Lot Description: PARCEL NUMBER 18-2, RTS 679-652 - 5 MI E OF SCOTTSVILLE, 1286.43 AC

Street Address: 37.72838986, -78.45187501; TBD Paynes Pond Road located North of Bridgeport Road, East of Route 20, West of Hardware Rd.

Directions from the County Administration Building to the Proposed Site: From the County Administration Building, turn right onto US-60 E. Continue for 0.5 mi before turning left onto State Rte 631. In 3.8 mi, turn left onto VA-20 N. Continue for 10.5 mi then turn right onto State Rte 652. Continue for 3.7 mi before turning left onto State Re 679. Continue on State Rte 679 for 0.5 mi, then turn left. Destination of above GPS coordinates will be 0.2 mi on the right.

Name of Applicant: Riverstone Solar, LLC
Mailing Address:
ATTN: Jimmy Merrick, Apex Clean Energy Inc, 310 4th St NE Suite 300, Charlottesville VA 22902

Daytime Phone: (434)-282-2107 Cell Phone: _____

Email: Jimmy.Merrick@apexcleanenergy.com Fax: N/A

Name of Property Owner: Weyerhaeuser Company, a Washington corporation

Mailing Address: Weyerhaeuser Company, 220 Occidental Ave. S. Seattle, WA 98104

Daytime Phone: 206-539-4406 Cell Phone: _____

Email: Anthony.Chavez@weyerhaeuser.com Fax: _____

Signature of Owner: Anthony Chavez **Date:** 01-12-2022

Signature of Applicant: _____ **Date:** 1-12-2022

Riverstone Solar, LLC
By: Apex Clean Energy Finance, LLC
Its: Sole Member
By: Apex GBR, LLC
Its: Sole Member
By: Apex Clean Energy Holdings, LLC
Its: Manager

Please indicate to whom correspondence should be sent:
___Owner of Property____Contractor Purchaser / Lessee____Authorized Agent____Engineer
_X_Applicant

3.8.3. Adjacent Property Owners and Affidavit

ADJACENT PROPERTY OWNERS AFFIDAVIT

STATE OF VIRGINIA
COUNTY OF BUCKINGHAM

This 12 day of January, year 2022,

I Riverstone Solar, LLC hereby make oath that
(printed name of owner/contract purchaser/authorized agent)

the list of adjoining landowners is a true and accurate list as submitted with my application.

Signed: (to be signed in front of notary public)

Riverstone Solar, LLC
By: Apex Clean Energy Finance, LLC
Its: Sole Member
By: Apex GBR, LLC
Its: Sole Member
By: Apex Clean Energy Holdings, LLC
Its: Manager

(owner / contract purchaser / authorized agent – please circle one)

NOTARY:
COMMONWEALTH OF VIRGINIA

CITY
~~COUNTY~~ OF CHARLOTTESVILLE

STATE OF VIRGINIA

Subscribed and sworn to me on the 12th day of January,

of the year 2022. My Commission expires on 6/30/2022.

Notary Public Signature: Sarah Ann Fromme

Stamp:

SARAH ANN FROMME NOTARY PUBLIC REG # 7775042 COMMISSION EXPIRES 6/30/2022 COMMONWEALTH OF VIRGINIA

3.8.4. Current Real Estate Taxes

TAX INFORMATION SHEET

FILE NO.: 19010008

ASSESSED IN THE NAME OF: Weyerhaeuser Company

LEGAL DESCRIPTION: PIN 17-8; PIN 17-9; PIN 17-13 AND PIN 18-2

TAX MAP #: 17-8 ACCOUNT/BILL#

ASSESSMENT FOR: 2021

LAND: $606,900.00
IMPROVEMENT: $ 0.00
TOTAL: $606,900.00

ANNUAL TAXES FOR: 2021

IN THE AMOUNT OF: $3,155.88

PAID: June 5th and December 5th

AMOUNT PER HALF: $1,577.94

TAXES PAID THROUGH AND INCLUDING: 2nd half of 2021

DELINQUENT TAXES: None

TAX MAP#: 17-9

ASSESSMENT FOR: 2021

LAND: $107,100.00
IMPROVEMENT: $ 0.00
TOTAL: $107,100.00

ANNUAL TAXES FOR: 2021

IN THE AMOUNT OF: $556.92

PAID: June 5th and December 5th

AMOUNT PER HALF: $278.46

TAXES PAID THROUGH AND INCLUDING: 2nd half of 2021

DELINQUENT TAXES: None

This report is based on tax collection office records as made Available to the examiner. Property may be subject to supplemental assessments and taxes for improvements completed during the year. This Company is not responsible for increase in the tax rate not reflected in the above information.

TAX MAP#: 17-13

ASSESSMENT FOR: 2021

LAND: $95,200.00
IMPROVEMENT: $ 0.00
TOTAL: $95,200.00

ANNUAL TAXES FOR: 2021

IN THE AMOUNT OF: $495.04

PAID: June 5th and December 5th

AMOUNT PER HALF: $247.52

TAXES PAID THROUGH AND INCLUDING: 2nd half of 2021

DELINQUENT TAXES: None

TAX MAP#: 18-2

ASSESSMENT FOR: 2021

LAND: $2,058,300.00
IMPROVEMENT: $ 0.00
TOTAL: $2,058,300.00

ANNUAL TAXES FOR: 2021

IN THE AMOUNT OF: $10,703.16

PAID: June 5th and December 5th

AMOUNT PER HALF: $5,351.58

TAXES PAID THROUGH AND INCLUDING: 2nd half of 2021

DELINQUENT TAXES: None

This report is based on tax collection office records as made Available to the examiner. Property may be subject to supplemental assessments and taxes for improvements completed during the year. This Company is not responsible for increase in the tax rate not reflected in the above information.

3.8.5. Cultural Resource Assessment and Record Check

CULTURAL RESOURCE ASSESSMENT AND RECORD CHECK FOR PENDING DEVELOPMENT APPLICATIONS

Case Number / File Name: _____

Visual Inspection Findings (describe what is on the property now):

As required by the DEQ Permit by Rule Process, the Project will be required to perform a Cultural Phase 1 Analysis on the proposed Project Area. Any significant cultural resources identified will be avoided with a buffer.

County Records Check (describe the history of this property):

The Applicant has performed a cultural desktop screening using the VA Dept of Historical Resources State database. The Applicant has also performed a county records check for significant cultural and historic resources with the Buckingham Historical Society. County records indicate potential for cemeteries to exist on site.

Were any historical sites or gravesites found on site, or be suspected by a reasonable person to be on the site? Yes X No _____
If yes, please explain and show on the site plan the location of such and explain any historical significance:

Cemeteries are suspected to exist on site. The exact size and location of these areas will be documented through a field survey and provided to DEQ and DHR for review via a Phase 1 Cultural analysis. These sites are not anticipated to have any historical significance.

Will this proposal have any impact on the historical site or gravesite? Yes _____ No X
If yes, please explain any impact:

As previously mentioned above, any significant cultural resources, including cemeteries, will be avoided by a buffer and preserved for the life of the project.

Owner/Applicant Signature: _____ Date: 1-12-22

Printed Name: Ken Young Title: Chief Operating Officer

Riverstone Solar, LLC
By: Apex Clean Energy Finance, LLC
Its: Sole Member
By: Apex GBR, LLC
Its: Sole Member
By: Apex Clean Energy Holdings, LLC
Its: Manager

Legend

- Project Study Limits - 1,984.7 Acres
- Half Mile Project Buffer
- Architecture Resources
- Archaeological Resources
- DHR Easements - Not Present
- Individual Historic District Properties - Not Present
- Archaeology Phase 1 Survey

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.
1001 Boulders Parkway, Suite 300
Richmond, VA 23225
TEL 804.200.6500
www.timmons.com

PROJECT NAME & LOCATION

RIVERSTONE SOLAR

BUCKINGHAM COUNTY, VIRGINIA

DATE	05/21/2021
PROJECT NUMBER	35859.044
PROJECT NAME	RIVERSTONE SOLAR
DESIGNED BY / DRAWN BY	J. FRAZIER

NOTES:
Project Limits are approximate.
Cultural resource data from DHR.
Aerial imagery from VGIN.

REVISIONS

#	MM/DD/YY	DESCRIPTION

DRAWING DESCRIPTION
CULTURAL RESOURCES MAP

SCALE (FEET)
0 1,000 2,000
PLANS PRINTED AS 11X17 ARE HALF SCALE

SCALE	SHEET NUMBER
H:1 " = 1,000 '	1

Y:\851\35859.044-Riverstone Solar\GIS\Common Shared Exhibits\99999-VCRIS.mxd

Property Information

Property Names

Name Explanation	Name
Historic/Current	Paynes Mill

Property Evaluation Status

Not Evaluated

County/Independent City(s): Buckingham (County)
Incorporated Town(s): *No Data*
Zip Code(s): *No Data*
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): DIANA MILLS

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

Mill sits in a cleared but becoming overgrown section of a heavily wooded area.

Surveyor Assessment:

This bulding though vacant is a good example of mill construction in Buckingham County.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Industry/Processing/Extraction
Resource Type: Mill
NR Resource Type: Building
Historic District Status: *No Data*
Date of Construction:
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Commerce/Trade, Industry/Processing/Extraction
Other ID Number: *No Data*
Architectural Style: Other
Form: *No Data*
Number of Stories: 1.5
Condition: Fair
Threats to Resource: Vacant
Architectural Description:

The mill is a one and a half story frame structure covered with boards. A large pipe-type structure leads into the mill and the water wheel sits beside it. The roof is a front gable metal roof with standing seam treatment.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Frame	Wood	Boarded
Roof	Gable, Front	Metal	Standing Seam

Secondary Resource Information

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Other

Project Review File Number: *No Data*
Investigator: Thompson, Norman
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: *No Data*
Dhr Library Report Number: *No Data*
Project Staff/Notes:

Photos taken, but no written information in file.

Bibliographic Information

Bibliography:

No Data

Property Notes:

No Data

3.8.6. Application For a Traffic Impact Determination

APPLICATION FOR A TRAFFIC IMPACT DETERMINATION

Please fill out the following information before presenting to VDOT:

Case Number / File Name: _____

Applicant: Riverstone Solar, LLC

Location: TBD Paynes Pond Rd located North of Bridgeport Road, East of Route 20, West of Hardware Rd

Proposed Use: Utility Scale Solar Facility

For VDOT use only:

_____ A Traffic Impact Statement is required per 24 VAC 30-155-60.

__X__ A Traffic Impact Statement is not required. The traffic generated by the proposed zoning change / development does not exceed normal thresholds.

_____ The Traffic Impact Analysis has been waived by the Zoning / Planning Department for the following reasons:

_____

_____

Does the existing entrance meet VDOT requirements for the proposed use?
Yes _____ No __X__ If no, please explain the necessary steps to bring into compliance with the requirements for the proposed use:

PROPOSED ENTRANCES MUST BE SUBITTED TO VDOT PRIOR TO CONSTRUCTION. EACH ENTRANCE WILL REQUIRE A VDOT LAND USE PERMIT.

Signature of VDOT Resident Engineer: Steve Snell P.E.

Printed Name: STEVE SNELL Date: 8-4-21

3.8.7. Signage at Property

SIGNAGE AT PROPERTY

The Buckingham County Zoning Ordinance requires the following:

The applicant in any case which requires a public hearing shall post signs furnished by the agent on each parcel involved at least 21 days prior to the public hearing indicating that a public hearing is eminent, the date, a rezoning issue, and a County contact number. The signs shall be placed on the VDOT right-of-way closest to the applicant's property line and shall be clearly visible from the road with bottom of the sign not less than one and one half feet above the ground. If more than one public road abuts the property, the signs shall be placed in the same manner as above for each abutting road. If no road abuts a property, then the agent shall define an area for the signs. The agent may ask the applicant that the sign be moved to another area either on the property to achieve greater public visibility. The applicant shall be responsible for keeping the signs free from grass, weeds, and any other plants or vines that may obstruct the public's view. The applicant shall contact the Virginia Department of Transportation for any information concerning where the right-of-way is located. The applicant shall be responsible for the signs should VDOT or their contractor conduct mowing or clearing of the right-of-way in the area where the sign is located.

Any signs required shall be maintained at all times by the applicant up to the time of the final public hearing. No person, except the applicant or the agent or an authorized agent of either, shall remove or tamper with any sign furnished during the period it is required to be maintained under this section. All signs erected under this ordinance shall be removed by the applicant within 15 days following a decision at the final public hearing and shall be returned to the agent. The applicant shall purchase the signs at a fee as determined by the Board of Supervisors and shall be non-refundable. The applicant shall be responsible for the replacement of the sign(s) and shall contact the agent as soon as possible for another sign to be replaced as the manner described above. Should the sign(s) have to be replaced more than twice, this section shall no longer be forced upon the applicant.

I have read, understand and agree to the above requirements.

Applicant/Owner: _____

Riverstone Solar, LLC
By: Apex Clean Energy Finance, LLC
Its: Sole Member
By: Apex GBR, LLC
Its: Sole Member
By: Apex Clean Energy Holdings, LLC
Its: Manager

Date: 1/12/2022

3.8.8. Riverstone Solar, LLC Proposed Special Use Permit Schedule

Riverstone Solar Proposed Special Use Permit Schedule	
Date	**Proposed Action**
January 24, 2022	Case is introduced to Planning Commission. Planning Commission sets joint Public Hearing for next regularly scheduled meeting on February 28.
February 28, 2022	Planning Commission and Board of Supervisors hold joint Public Hearing.

3.8.9. The Property Vesting Deeds and Plats

Parcel Number	Owner	Acreage	Legal Description	Deed Reference	Plat Reference
17-8	Weyerhaeuser Company, a Washington corporation	520.19	RT 652-720 - 7 MI S OF SCOTTSVILLE 520.185 AC	D.B. 412, PG. 791 (Tract 64)	P.B. 3, PG. 74
17-9	Weyerhaeuser Company, a Washington corporation	97.4	RT 720 - 2 MI N OF CENTENARY 97.4 AC	D.B. 412, PG. 791 (Tract 65)	D.B 67, PG. 293
17-13	Weyerhaeuser Company, a Washington corporation	59.5	OFF RT 652 - 7 MI S OF SCOTTSVILLE 59.5 AC	D.B. 412, PG. 791 (Tract 66)	D.B 196, PG. 24
18-2	Weyerhaeuser Company, a Washington corporation	1286.43	RTS 679-652 - 5 MI E OF SCOTTSVILLE 1286.43 AC	D.B. 412, PG. 791 (Tract 67)	P.C 1, SL. 68

#17-06

BOOK 438 PAGE 226

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

The records of this office show on September 28, 2016, Weyerhaeuser Company, a Washington corporation qualified to transact business in Virginia, filed in the Office of the Secretary of State of Washington, articles of merger, merging Plum Creek Timberlands, L.P., a Delaware limited partnership, into Weyerhaeuser Company, a Washington corporation qualified to transact business in Virginia, a duly authenticated copy was filed in the Clerk's Office of the Commission on December 12, 2016.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
December 13, 2016

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CIS0357

035 Rec Fee		
St. R. Tax		
Co. R. Tax		
Transfer		
Clerk	15	00
Lib.(145)		
T.T.F.		
Grantor Tax		
036 Proc. Fee		
Total $	10	00

VIRGINIA: CLERK'S OFFICE OF THE CIRCUIT COURT OF BUCKINGHAM COUNTY

The foregoing instrument with acknowledgement was admitted to record on 1-17 20 17, at 11:25A M. in D.B. 438 Page(s) 226

Teste: MALCOLM BOOKER, JR., CLERK

BY: _____, DEPUTY CLERK

#14-242

STATE OF VIRGINIA)
)
)
COUNTY OF BUCKINGHAM)

AFFIDAVIT OF MERGER

WHEREAS, Timberlands III, LLC, a Delaware limited liability company ("Timberlands III"), merged with and into Plum Creek Timberlands, L.P., a Delaware limited partnership ("PCT"), effective December 23, 2013 as evidenced by the original certified copy of the duly filed Certificate of Merger from the Delaware Secretary of State attached hereto as **Exhibit "A"** and incorporated herein by this reference; and

WHEREAS, prior to the said merger Timberlands III owned certain real property in Buckingham County, Virginia ("Real Property").

NOW, THEREFORE, PCT, which has been duly qualified to do business in Virginia since September 18, 2001 files this Affidavit of Merger to provide record notice of the said merger and name change of the owner of the Real Property.

Witness the hand of the duly authorized corporate officer of PCT this 29th day of January, 2014.

[Signature page follows]

PLUM CREEK TIMBERLANDS, L.P.,
a Delaware limited partnership

By: Plum Creek Timber I, L.L.C.,
Its general partner

By: _____
Rick R. Holley
Chief Executive Officer

Attest:

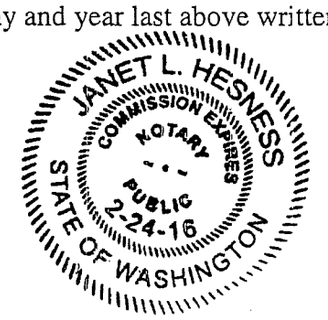
By: _____
Elizabeth Bergquist
Assistant Secretary

ACKNOWLEDGMENT

STATE OF WASHINGTON)
)ss
COUNTY OF KING)

On this 29th day of January, 2014, before me personally appeared Rick R. Holley and Elizabeth Bergquist, to me known to be the Chief Executive Officer and the Assistant Secretary, respectively, of Plum Creek Timber I, L.L.C., general partner of Plum Creek Timberlands, L.P., the limited partnership that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited partnership for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument on behalf of the limited partnership and that the seal affixed is the seal of said limited partnership.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.



_____
Notary Public in and for the
State of Washington
Residing at Seattle
My Commission Expires: 2/24/16
Printed Name: Janet L. Hesness

EXHIBIT "A"

SEE FOLLOWING PAGE

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"TIMBERLANDS III, LLC", A DELAWARE LIMITED LIABILITY COMPANY,

WITH AND INTO "PLUM CREEK TIMBERLANDS, L.P." UNDER THE NAME OF "PLUM CREEK TIMBERLANDS, L.P.", A LIMITED PARTNERSHIP ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-THIRD DAY OF DECEMBER, A.D. 2013, AT 5:22 O'CLOCK P.M.

Jeffrey W. Bullock, Secretary of State

2921725 8100M

140102137

AUTHENTICATION: 1092643

DATE: 01-28-14

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 05:22 PM 12/23/2013
FILED 05:22 PM 12/23/2013
SRV 131469551 - 2921725 FILE

STATE OF DELAWARE

CERTIFICATE OF MERGER OF

A DOMESTIC LIMITED LIABILITY COMPANY INTO

A DOMESTIC LIMITED PARTNERSHIP

Pursuant to Title 6, Section 17-211 of the Delaware Limited Partnership Act, the undersigned limited partnership executed the following Certificate of Merger:

FIRST: The name of the surviving limited partnership is Plum Creek Timberlands, L.P., a Delaware limited partnership.

SECOND: The name of the limited liability company being merged into the limited partnership is Timberlands III, LLC, a Delaware limited liability company.

THIRD: The agreement of merger or consolidation has been approved and executed by each of the business entities which is to merge or consolidate.

FOURTH: The name of the surviving limited partnership is

PLUM CREEK TIMBERLANDS, L.P., a Delaware limited partnership.

FIFTH: An agreement of merger or consolidation is on file at a place of business of the surviving Delaware Limited Partnership and the address thereof is

601 Union Street, Suite 3100, Seattle, WA 98101

SIXTH: A copy of the agreement of merger or consolidation will be furnished by the surviving Limited Partnership, on request and without cost, to any partner of any domestic limited partnership or any person holding an interest in any other business entity which is to merge or consolidate.

IN WITNESS WHEREOF, said Limited Partnership has caused this certificate to be signed by its general partner this 23rd day of December, 2013

PLUM CREEK TIMBER I, L.L.C.

By: _____

Name: James A. Kraft

Title: Sr. Vice President & General Counsel

035 Rec Fee	
St. R. Tax	
Co. R. Tax	
Transfer	14 50
Clerk	1 50
Lib.(145)	5 00
T.T.F.	
Grantor Tax	
036 Proc. Fee	
Total $	21 00

VIRGINIA: CLERK'S OFFICE OF THE CIRCUIT COURT OF BUCKINGHAM COUNTY

The foregoing instrument with acknowledgement was admitted to record on 2-21 20 14, at 2:35 PM. in D.B. 414 Page(s) 325-329

Teste: MALCOLM BOOKER, JR., CLERK

BY: _____, DEPUTY CLERK

3.9. Economic and Fiscal Contribution to Buckingham County, Virginia

JULY 29, 2021

RIVERSTONE SOLAR LLC

ECONOMIC AND FISCAL CONTRIBUTION TO BUCKINGHAM COUNTY, VIRGINIA

MANGUM economics

4201 DOMINION BOULEVARD, SUITE 114
GLEN ALLEN, VIRGINIA 23060
804-346-8446
MANGUMECONOMICS.COM

About Mangum Economics, LLC

Mangum Economics, LLC is a Richmond, Virginia based firm that specializes in producing objective economic, quantitative, and qualitative analysis in support of strategic decision making. Much of our recent work relates to IT & Telecom Infrastructure (data centers, terrestrial and subsea fiber), Renewable Energy, and Economic Development. Examples of typical studies include:

POLICY ANALYSIS

Identify the intended and, more importantly, unintended consequences of proposed legislation and other policy initiatives.

ECONOMIC IMPACT ASSESSMENTS AND RETURN ON INVESTMENT ANALYSES

Measure the economic contribution that businesses and other enterprises make to their localities.

WORKFORCE ANALYSIS

Project the demand for, and supply of, qualified workers.

CLUSTER ANALYSIS

Use occupation and industry clusters to illuminate regional workforce and industry strengths and identify connections between the two.

The Project Team

Martina Arel, M.B.A.
Research Director
– Economic Development and Renewable Energy

A. Fletcher Mangum, Ph.D.
Founder and CEO

Table of Contents

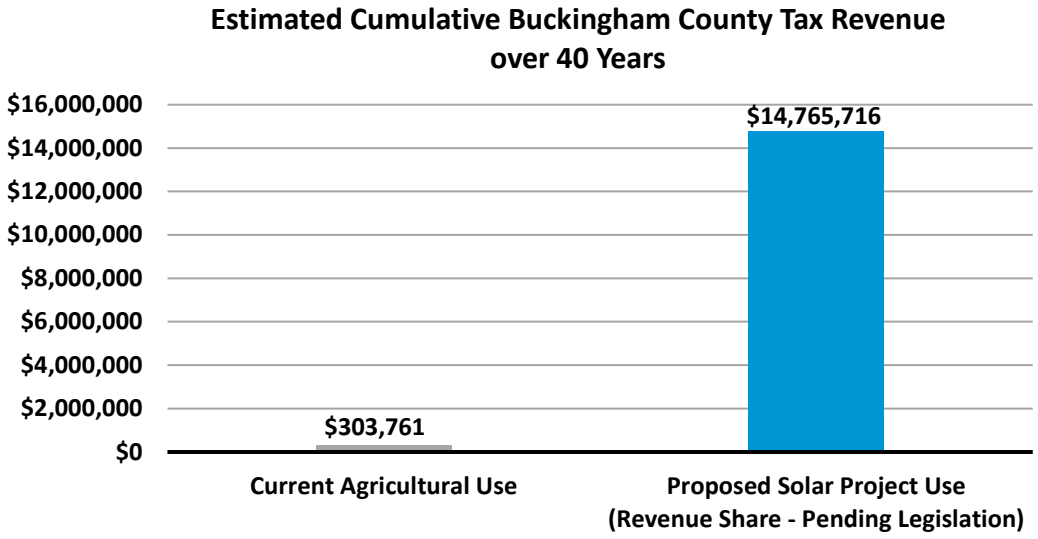
Executive Summary

This report assesses the economic and fiscal contribution that the proposed Riverstone Solar LLC project would make to Buckingham County, Virginia. The primary findings from that assessment are as follows:

1) Riverstone Solar is a proposed 149.5-Megawatt (MW) AC solar photovoltaic power generating facility. The project would be located north of Bridge Port Road, east of Route 20, and west of Hardware Road (Rt 719) in Buckingham County, Virginia. The total acreage to be leased encompasses approximately 1,965 acres that are currently used primarily for timber operations. The actively used, fenced-in portion of the solar site would be approximately 1,000 acres.

2) **The proposed Riverstone Solar project would make a significantly greater fiscal contribution to Buckingham County than the property generates in its current agricultural use. We estimate that the proposed project would generate approximately:**

   - $1.9 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction *(see p. 15).*
   - $14.8 million in cumulative county revenue over the facility's anticipated 40-year operational life assuming revenues are generated from the reassessment of the property and a revenue share agreement between Riverstone Solar and Buckingham County that is based on the project's generation capacity *(see p. 17ff)*, as compared to approximately $303,761 in cumulative county revenue in the property's current agricultural use *(see p. 27f)* – a difference of approximately $14.5 million.[1]



[1] Revenue share estimate includes a 10 percent escalator that is applied to the $1,400 per MW revenue share every five years. This escalator was introduced and signed into law in the 2021 General Assembly and went into effect on July 1, 2021 (SB 1201/HB 2006).

3) **The proposed Riverstone Solar project would also make a significant economic contribution to Buckingham County:**

- The proposed Riverstone Solar project would provide an estimated one-time pulse of economic activity to Buckingham County during its construction phase *(see p. 15)* supporting approximately:
  - 482 jobs.
  - $24.3 million in associated labor income.
  - $66.7 million in economic output.
- The proposed Riverstone Solar project would provide an estimated annual economic impact to Buckingham County during its ongoing operational phase *(see p. 16f)* supporting approximately:
  - 6 jobs.
  - $255,564 in associated labor income.
  - $725,187 in economic output.

4) **The proposed Riverstone Solar project would provide a boost to Buckingham County's construction sector:**

- At 144 jobs, construction is Buckingham County's 3rd largest major industry sector. It also pays average weekly wages ($924/week) that are 21 percent above the county-wide average ($764/week).
- We estimate that the proposed Riverstone Solar project could directly support 399 jobs and $30.9 million in wages in Buckingham County's construction sector.[2]

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

[2] Please note that although employment within a local construction sector can sometimes quickly expand to take advantage of new opportunities, because of the relatively small size of Buckingham County's existing construction sector it is not possible to know with certainty what proportion of these jobs would go to county construction contractors or be filled by County residents.

Introduction

This report assesses the economic and fiscal contribution that the proposed Riverstone Solar LLC project would make to Buckingham County, Virginia. This report was commissioned by Apex Clean Energy, Inc. and produced by Mangum Economics.

The Project

Riverstone Solar is a proposed 149.5-Megawatt (MW) AC solar photovoltaic power generating facility. The project would be located north Bridge Port Road, east of Route 20, and west of Hardware Road (Rt 719) in Buckingham County, Virginia. The total acreage to be leased encompasses approximately 1,965 acres that are currently used primarily for timber operations. The actively used, fenced-in portion of the solar site would be approximately 1,000 acres.

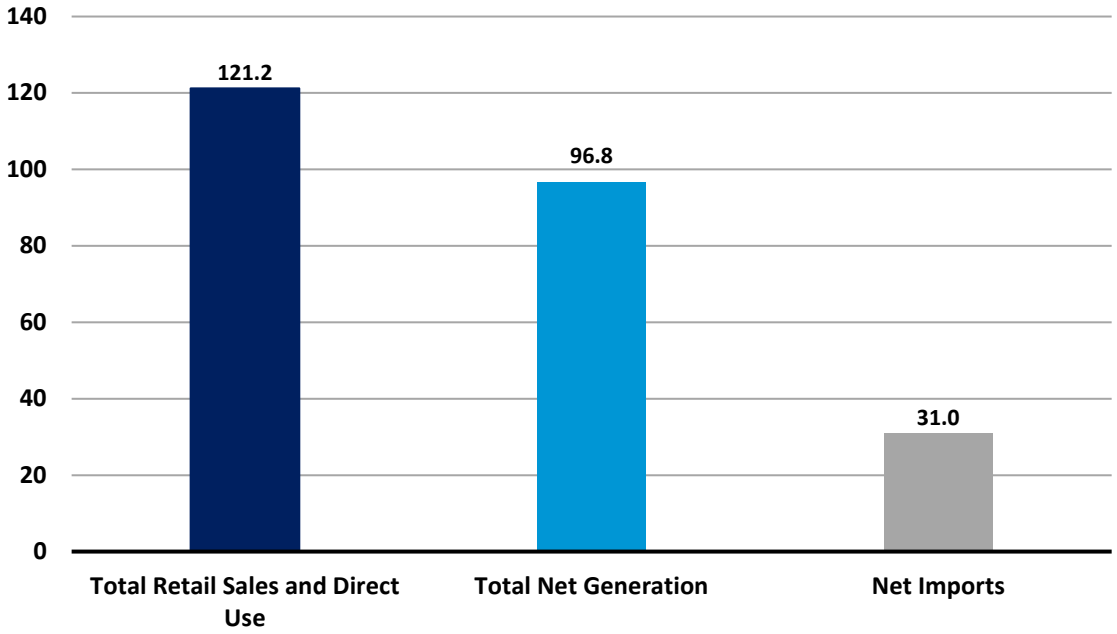
Electricity Production in Virginia

In this section, we provide a backdrop for the proposed Riverstone Solar project by profiling Virginia's electricity production sector and the role that solar energy could play in that sector.

Overall Market

As shown in Figure 1, in 2019 electricity sales and direct use in Virginia totaled 121.2 million megawatt hours, ranking the state 11th among the fifty states in terms of electricity consumption. However, only 80 percent of that demand was met by in-state utilities, independent producers, and other sources. As a result, Virginia had to import the remaining electricity it consumed from producers in other states. As with all imports, this means that the jobs, wages, and economic output created by that production went to localities in those states, not to localities in Virginia.

Figure 1: Demand and Supply of Electricity in Virginia in 2019 (in millions of megawatt-hours)[3]



Sources of Production

Between 2009 and 2019, the total amount of electricity produced in Virginia increased from 70.1 to 96.8 million megawatt hours, while retail and direct consumption of electricity only increased from 110.9 to 121.2 million megawatt hours. Consequently, imports of electricity decreased by 17.7 million megawatt hours (or 36 percent) during this time. Figure 2 provides a comparison of the energy sources that were used to produce electricity in Virginia in each of those years. As these data show, the most significant change between 2009 and 2019 was a decrease in the use of coal and an increase in the use of natural gas. Where coal was the state's second largest source of electricity in 2009, accounting for 25.6 million megawatt hours (or 37 percent) of production, by 2019 production had fallen by 22.2 million megawatt hours, making coal a distant third place source of electricity with only 4 percent of production.

In contrast, the share of electricity produced using cleaner-burning low-emissions energy sources increased over the period. Where natural gas accounted for only 12.2 million megawatt hours (or 17 percent) of Virginia's electricity production in 2009, by 2019 that proportion had more than quadrupled to 58.0 million megawatt hours (or 60 percent of production), making natural gas the state's largest source of electricity. In addition, solar, which entered the Virginia electricity production market in 2016, increased its share to 0.9 million megawatt hours by 2019.

[3] Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Figure 2: Electricity Generation in Virginia by Energy Source in 2009 and 2019 (in millions of megawatt-hours) [4]

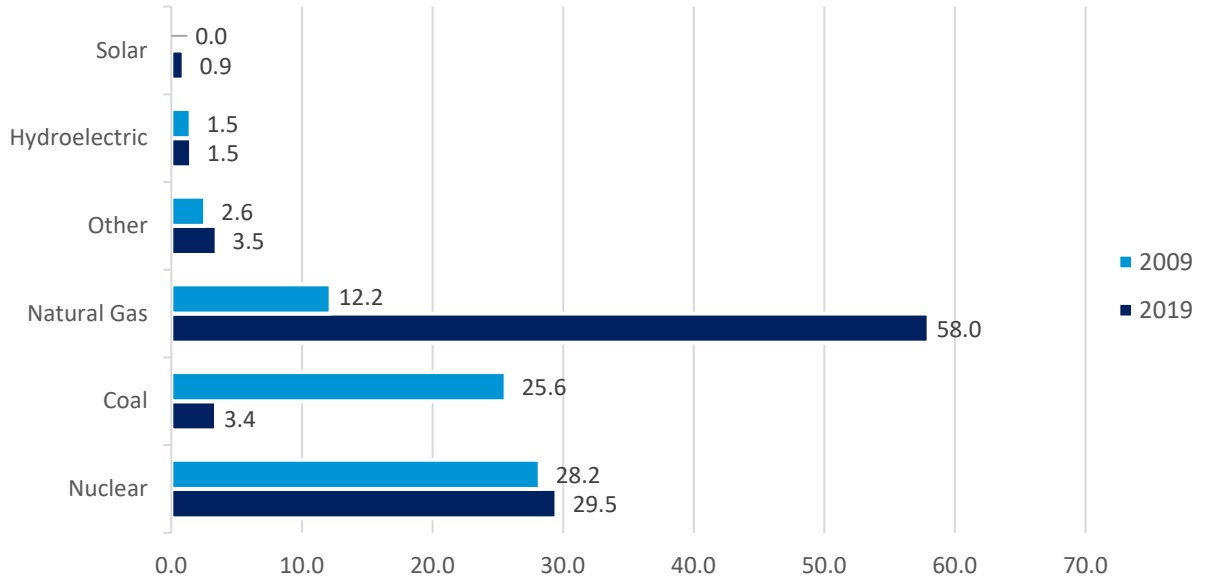
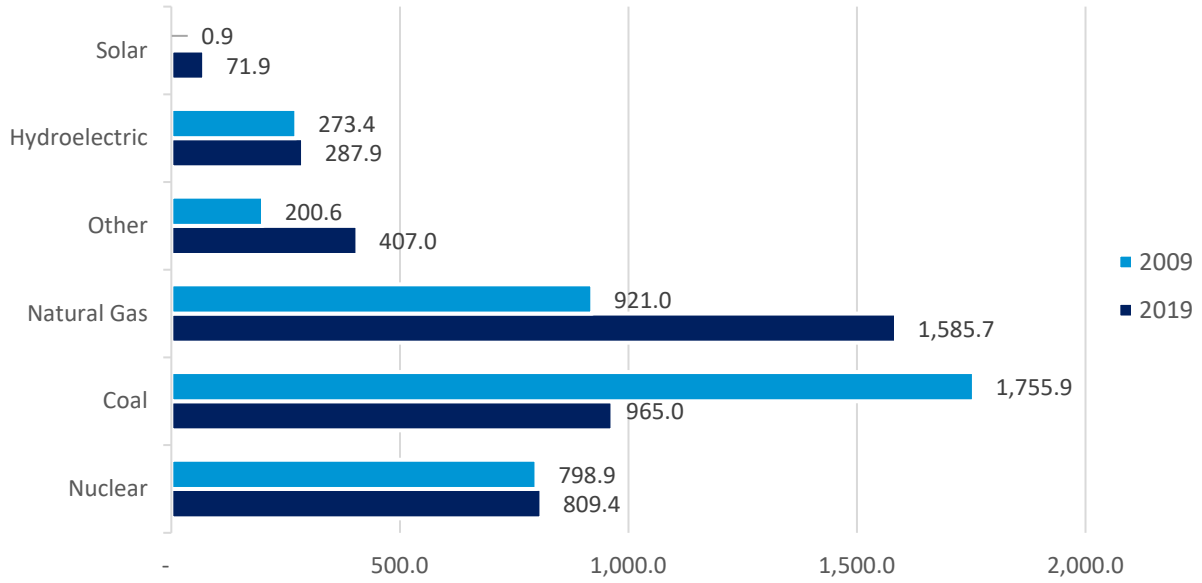


Figure 3 provides similar data for the U.S. as a whole. A quick comparison of Figures 2 and 3 shows that although the degree of reliance on specific energy sources for electricity production is quite different between the U.S. and Virginia, the trend toward lower-emissions energy sources is the same. Nationally, between 2009 and 2019 the amount of electricity produced using coal declined by 790.9 million megawatt hours from 44 to 23 percent of production, while in contrast the amount of electricity produced using natural gas increased by 664.6 million megawatt hours from 23 to 38 percent of production. Nationwide, as in Virginia, the reliance on renewable energy sources such as solar increased during this time but at a much faster pace than in Virginia. Between 2009 and 2019, the amount of electricity produced using solar increased by 71.0 million megawatt hours to 2 percent of total electricity production in the nation compared to 1 percent of total electricity production in Virginia.

[4] Data Source: U.S. Energy Information Administration. "Other" includes other biomass, other, petroleum, pumped storage, and wood.

Figure 3: Electricity Generation in the United States by Energy Source in 2009 and 2019 (in millions of megawatt-hours) [5]

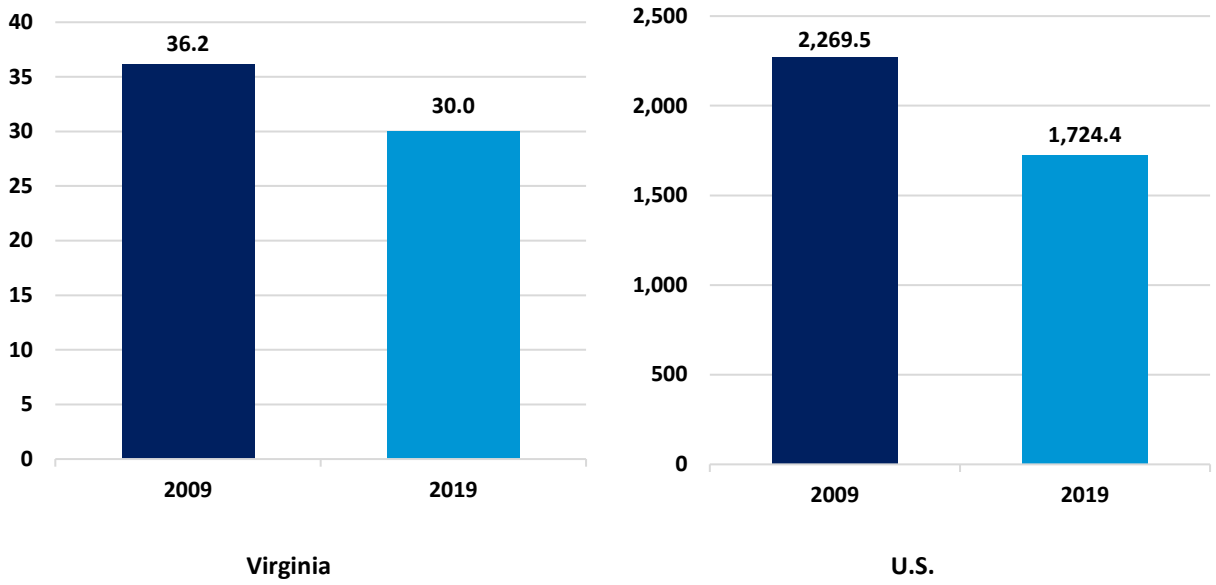


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is the U.S.'s largest source of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2009 and 2019 for both Virginia and the U.S. As these data indicate, between 2009 and 2019, as the share of electricity produced in Virginia by coal fell from 37 to 4 percent, carbon dioxide emissions from electricity production fell from 36.2 to 30.0 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 44 to 23 percent, carbon dioxide emissions from electricity production fell from 2,269.5 to 1,724.4 million metric tons.

[5] Data Source: U.S. Energy Information Administration. "Other" includes battery, geothermal, other, other biomass, other gas, petroleum, pumped storage, wind, and wood.

Figure 4: Carbon Dioxide Emissions from Electricity Production (millions of metric tons)[6]



Local Economic Profile

In this section, we provide context for the economic and fiscal impact assessments to follow by profiling the local economy of Buckingham County.

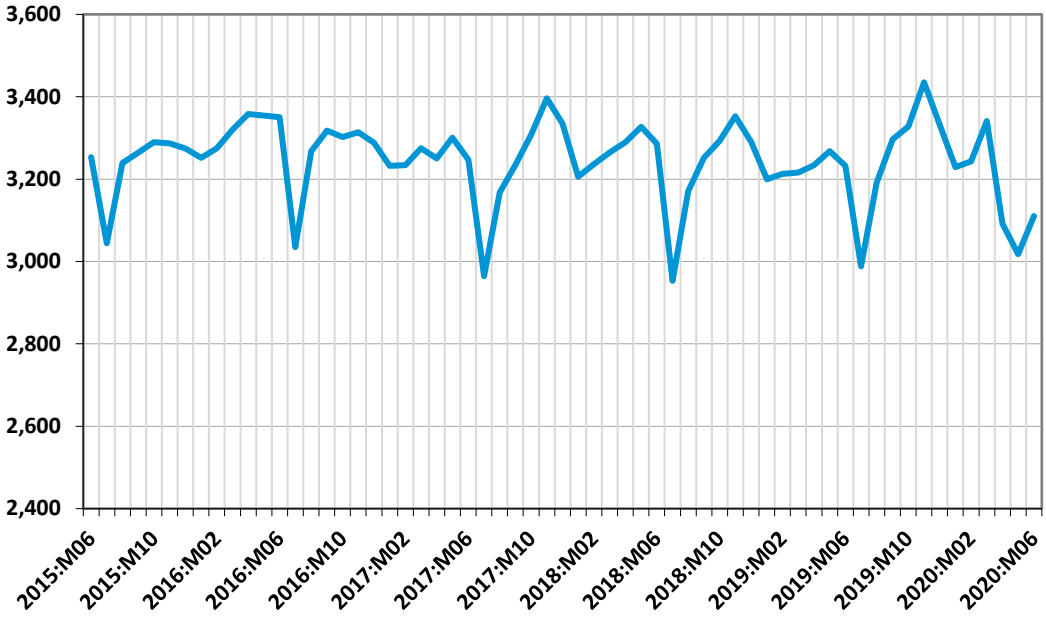
Total Employment

Figure 5 depicts the trend in total employment in Buckingham County from June 2015 to June 2020. Beyond seasonal variation, employment generally remained flat over this period. As of June 2020, total employment stood at 3,110 jobs, which represents a loss of 143 jobs or negative 4.4 percent employment growth over the five-year period. To put this number in perspective, total statewide employment in Virginia fell by only 3.7 percent over the same period.[7]

[6] Data Source: U.S. Energy Information Administration.

[7] Data Source: Bureau of Labor Statistics.

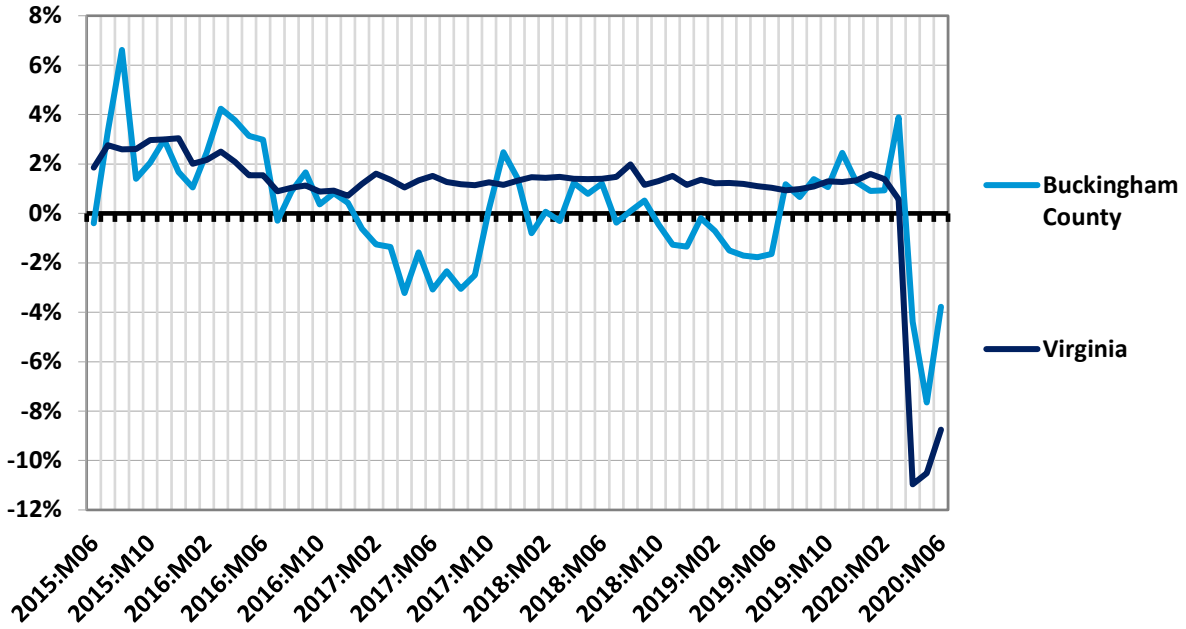
Figure 5: Total Employment in Buckingham County – June 2015 to June 2020[8]



To control for seasonality and provide context for the growth numbers given above, Figure 6 compares the year-over-year change in total employment in Buckingham County to that of Virginia as a whole over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, year-over-year employment growth in Buckingham County generally underperformed the statewide average from 2016 through 2019. During this period, total employment in Virginia grew at a steady rate of just below two percent, whereas total employment in Buckingham County often declined year-over-year. Beginning in April 2020, both Buckingham County and the state of Virginia experienced significant drops in employment numbers as a result of labor dislocations caused by the coronavirus pandemic. As of June 2020, the year-over-year change in total employment in Buckingham County was negative 3.8 percent while the change in employment for Virginia as a whole was negative 8.8 percent.

[8] Data Source: Bureau of Labor Statistics.

Figure 6: Year-Over-Year Change in Total Employment – June 2015 to June 2020[9]



Employment and Wages by Major Industry Sector

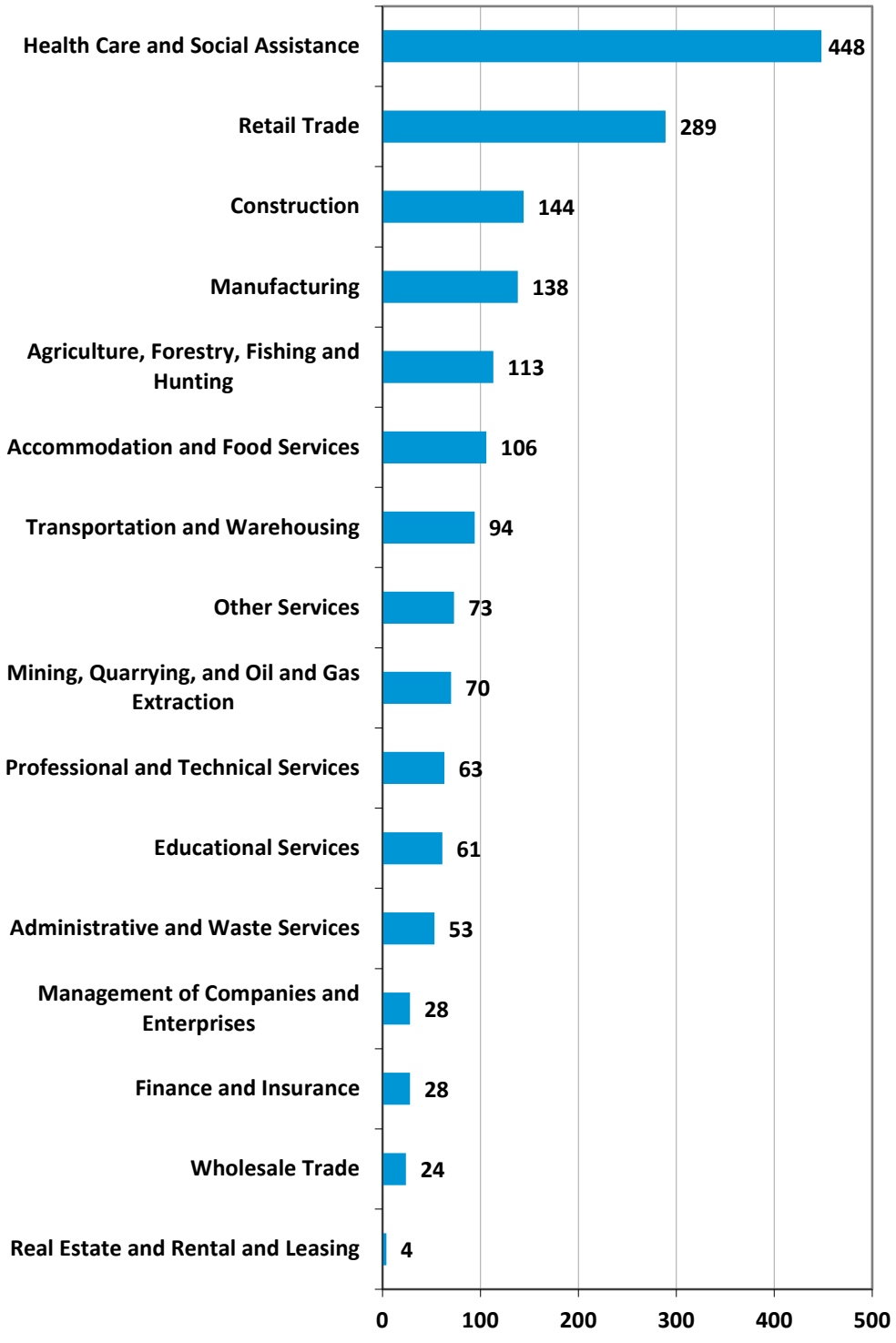
To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figures 5 and 6, Figures 7 through 9 provide data on private employment and wages in Buckingham County by major industry sector.

Figure 7 provides an indication of the distribution of private sector employment across major industry sectors in Buckingham County for the second quarter of 2020. As these data indicate, the county's largest industry sector that quarter was Health Care and Social Assistance (448 jobs), followed by Retail Trade (289 jobs) and Construction (144 jobs).

Figure 8 provides a similar ranking for average private sector weekly wages by major industry sector in Buckingham County for the second quarter of 2020. As these data show, the highest paying industry sectors that quarter were Management of Companies and Enterprises ($1,840 per week), Mining, Quarrying, and Oil and Gas Extraction ($973 per week), and Professional and Technical Services ($943 per week). For reference, the average private sector weekly wage across all industry sectors in Buckingham County that quarter was $764 per week.

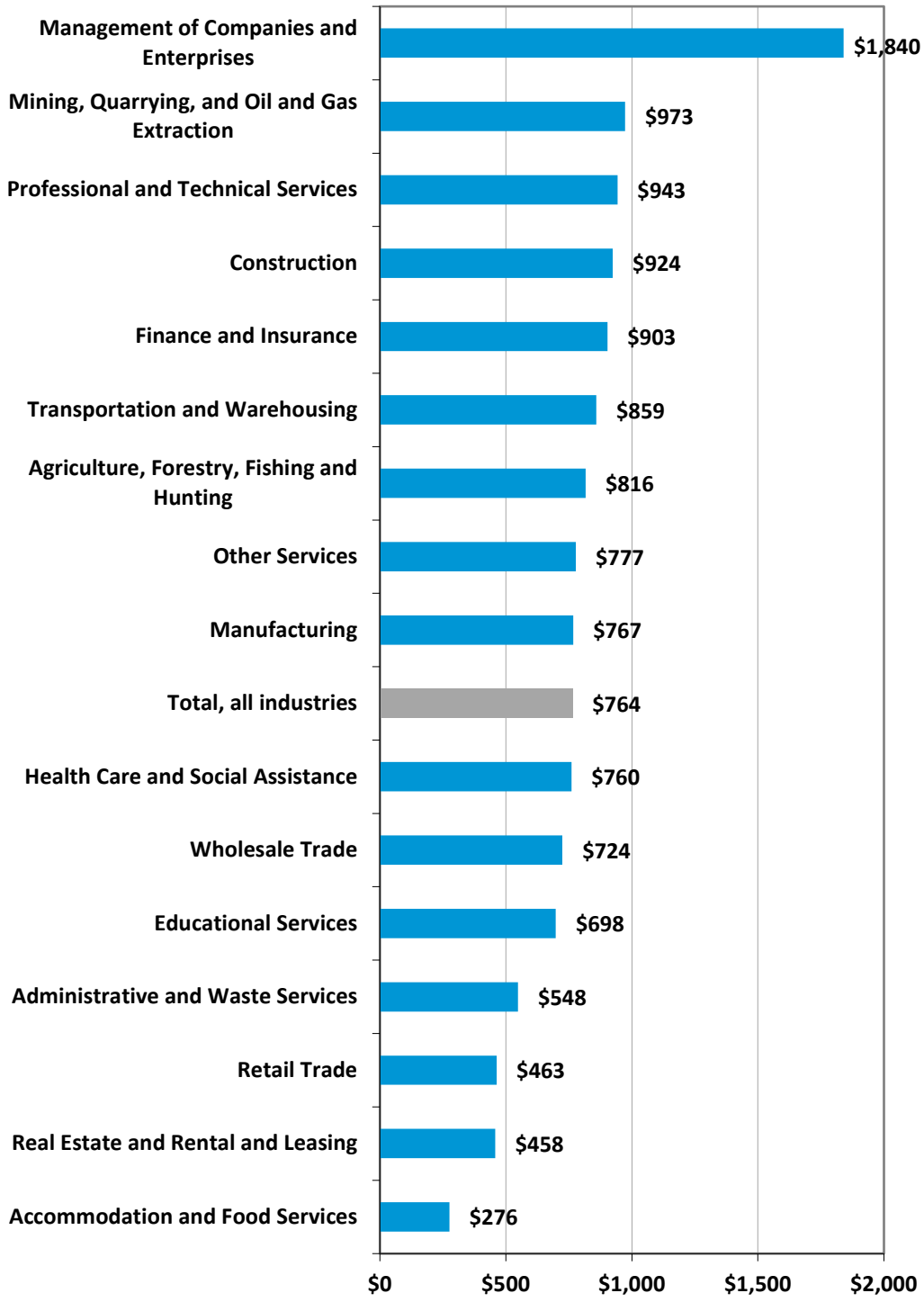
[9] Data Source: Bureau of Labor Statistics.

Figure 7: Private Employment by Major Industry Sector in Buckingham County – 2nd Qu 2020 [10]



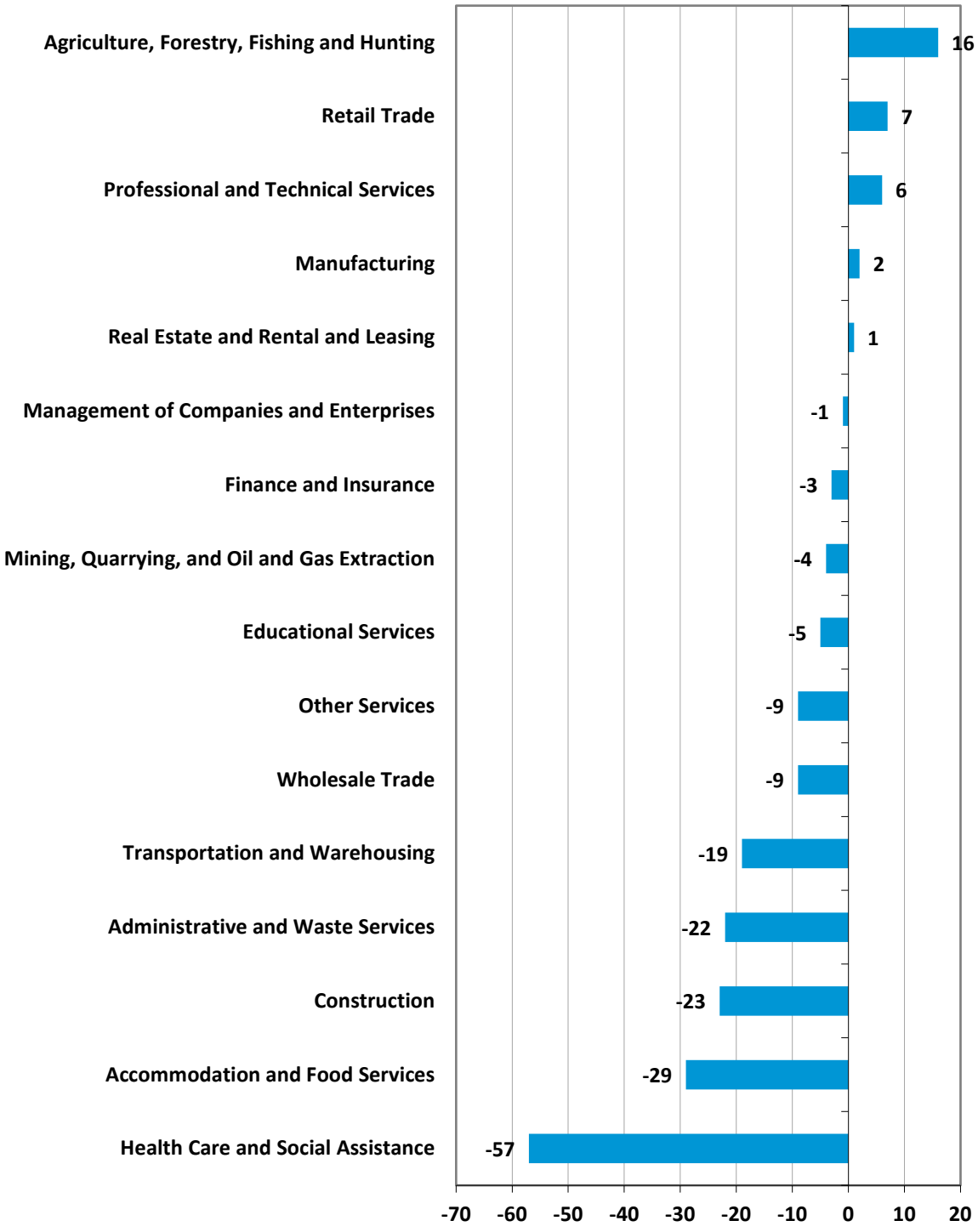
[10] Data Source: Virginia Employment Commission. Please note that data on the Utilities; Information; and Arts, Entertainment, and Recreation sectors have been suppressed due to issues of data confidentiality.

Figure 8: Average Private Weekly Wages by Major Industry in Buckingham County – 2nd Qu 2020[11]



[11] Data Source: Virginia Employment Commission. Please note that data on the Utilities; Information; and Arts, Entertainment, and Recreation sectors have been suppressed due to issues of data confidentiality.

Figure 9: Change in Private Employment by Industry in Buckingham County from 2nd Qu 2019 to 2nd Qu 2020[12]



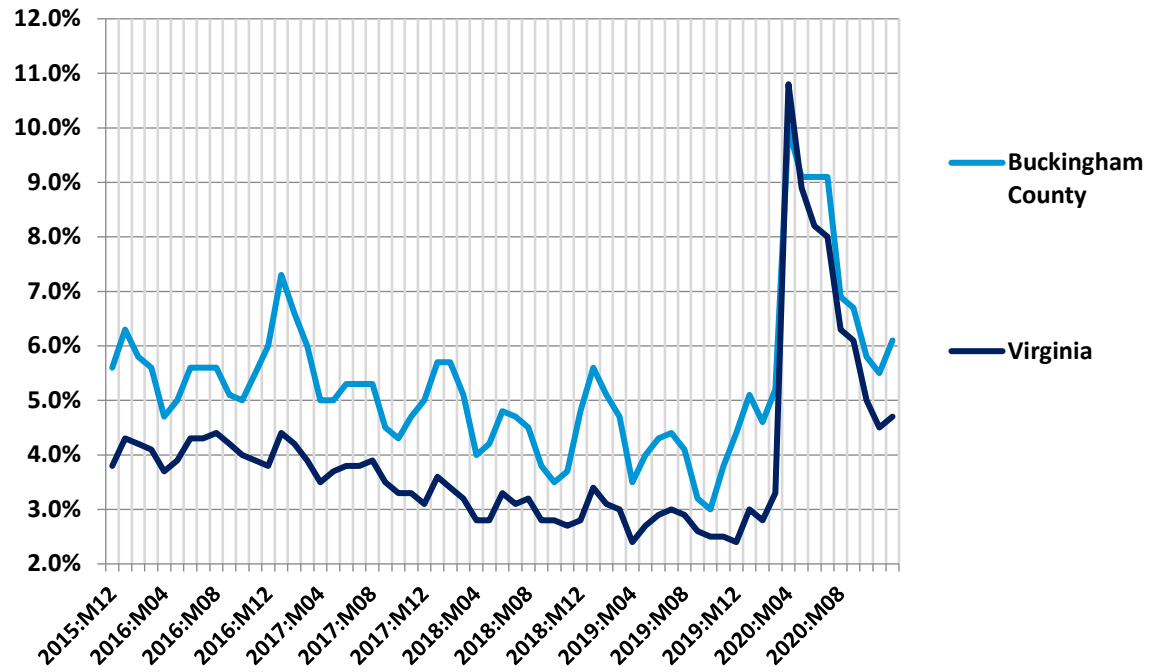
[12] Data Source: Virginia Employment Commission.

Lastly, Figure 9 details the year-over-year change in private sector employment from the second quarter of 2019 to the second quarter of 2020 in Buckingham County by major industry sector. Over this period, the largest employment gains occurred in the Agriculture, Forestry, Fishing and Hunting (up 16 jobs), Retail Trade (up 7 jobs), and Professional and Technical Services (up 6 jobs) sectors. The largest employment losses occurred in the Health Care and Social Assistance (down 57 jobs), Accommodation and Food Services (down 29 jobs), and Construction (down 23 jobs) sectors.

Unemployment

Figure 10 illustrates the trend in Buckingham County's unemployment rate over the five-year period from December 2015 through December 2020 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in Buckingham County generally tracked closely with statewide trends but at rates on average one and a half percentage points higher than the statewide rate. As of December 2020, unemployment stood at 6.1 percent in Buckingham County as compared to 4.7 percent in Virginia as a whole, reflecting the beginning of a recovery from the recent economic downturn caused by the coronavirus pandemic.

Figure 10: Unemployment Rate – December 2015 to December 2020[13]



[13] Data Source: Virginia Employment Commission.

Economic and Fiscal Impact

In this section, we quantify the economic and fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County. Our analysis separately evaluates the one-time pulse of economic activity that would occur during the construction phase of the project, as well as the annual economic activity that the project would generate during its ongoing operations phase.

Method

To empirically evaluate the likely local economic impact attributable to the proposed Riverstone Solar project, we employ a regional economic impact model called IMPLAN.[14] The IMPLAN model is one of the most commonly used economic impact simulation models in the U.S., and in Virginia is used by UVA's Weldon Cooper Center, the Virginia Department of Planning and Budget, the Virginia Employment Commission, and other state agencies and research institutes. Like all economic impact models, the IMPLAN model uses economic multipliers to quantify economic impact.

Economic multipliers measure the ripple effects that an expenditure generates as it makes its way through the economy. For example, as when the Riverstone Solar project purchases goods and services – or when contractors hired by the facility use their salaries and wages to make household purchases – thereby generating income for someone else, which is in turn spent, thereby becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier.

One of the primary advantages of the IMPLAN model is that it uses regional and national production and trade flow data to construct region-specific and industry-specific economic multipliers, which are then further adjusted to reflect anticipated actual spending patterns within the specific geographic study area that is being evaluated. As a result, the economic impact estimates produced by IMPLAN are not generic. They reflect as precisely as possible the economic realities of the specific industry, and the specific study area, being evaluated.

In the analysis that follows, these impact estimates are divided into three categories. First round direct impact measures the direct economic contribution of the entity being evaluated (e.g., own employment, wages paid, goods and services purchased by the Riverstone Solar project). Second round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. Total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), and economic output (the total amount of economic activity that is created in the economy).

[14] IMPLAN is produced by IMPLAN Group, LLC.

Construction Phase

In this portion of the section, we assess the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Riverstone Solar project would have on Buckingham County.

Assumptions

In conducting our analysis, we employ the following assumptions:

- For ease of analysis, all construction expenditures are assumed to take place in a single year.
- Total investment in the Riverstone Solar project is estimated to be $188.0 million.[15]
- Of that total:
    - Architecture, engineering, site preparation, and other construction and development costs are estimated to be $120.1 million.[16] It is estimated that up to 45 percent of that total could be spent with vendors in Buckingham County.[17]
    - Capital equipment costs are estimated to be $67.9 million.[18] It is anticipated that no capital equipment would be purchased from vendors in Buckingham County.[19]

Results

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Riverstone Solar project would directly provide a one-time pulse supporting approximately: 1) 399 jobs, 2) $20.9 million in labor income, and 3) $53.9 million in economic output to Buckingham County.[20]

Taking into account the economic ripple effects that direct investment would generate, we estimate that the total one-time impact on Buckingham County would support approximately: 1) 482 jobs, 2) $24.3 million in labor income, 3) $66.7 million in economic output, and 4) $1.9 million in state and local tax revenue.

[15] Data Source: Apex Clean Energy, Inc.
[16] Data Source: Apex Clean Energy, Inc.
[17] Data Source: IMPLAN Group LLC.
[18] Data Source: Apex Clean Energy, Inc.
[19] Data Source: IMPLAN Group LLC.
[20] It is important to note that construction sector jobs are not necessarily new jobs but the investments made can also support an existing job during the construction of the project.

Table 1: Estimated One-Time Economic and Fiscal Impact on Buckingham County from Construction of the Riverstone Solar Project[21]

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	399	$20,875,220	$53,902,000
2nd Round Indirect and Induced Economic Activity	83	$3,439,157	$12,750,608
Total Economic Activity	**482**	**$24,314,377**	**$66,652,608**
Fiscal Impact			
State and Local Tax Revenue			**$1,940,388**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

In this portion of the section, we assess the annual economic and fiscal impact that the proposed Riverstone Solar project would have on Buckingham County during its anticipated 40-year operational phase.

Assumptions

In conducting our analysis, we employ the following assumptions:

- The Riverstone Solar project would spend approximately $835,197 each year for maintenance and repair, vegetative control, and other operational expenditures.[22]
- The Riverstone Solar project would involve an investment of approximately $188.0 million in capital equipment and improvements to the existing property.[23]
- The proposed Riverstone Solar project would be situated on approximately 1,000 fenced-in acres within an approximate 1,964-acre tract of leased timberland.[24]
- Only the fenced-in acreage would be reassessed at a commercial solar use value estimated at approximately $10,000 per acre.[25]
- Tax rates and locality ratios remain constant throughout the analysis.
- The Riverstone Solar project's total generation capacity would be 149.9 MW AC.[26]

[21] Please note that although employment within a local construction sector can sometimes quickly expand to take advantage of new opportunities, because of the relatively small size of Buckingham County's construction sector, it is not possible to know with certainty what proportion of these jobs would go to county construction contractors or be filled by County residents. However, all workers employed at the site would have an indirect economic impact on Buckingham County through their purchases of food, beverages, accommodations, and other goods and services.
[22] Data Source: Apex Clean Energy, Inc.
[23] Data Source: Apex Clean Energy, Inc.
[24] Data Source: Apex Clean Energy, Inc.
[25] Data Source: Based on informal discussion with County Commissioner of Revenue, actual future assessment value for fenced-in acreage is currently unknown. Potential future assessment value is an estimate based on experience with comparable solar projects in Virginia.
[26] Data Source: Apex Clean Energy, Inc.

- The Riverstone Solar project would become operational in the fourth quarter of 2023.[27]
- The Riverstone Solar project's operational life expectancy is approximately 40 years.[28]

Results – Economic Impact

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Riverstone Solar project would directly support approximately: 1) 5 jobs, 2) $213,641 in labor income, and 3) $569,784 in economic output to Buckingham County. Taking into account the economic ripple effects that direct impact would generate, we estimate that the total annually supported impact on Buckingham County would be approximately: 1) 6 jobs, 2) $255,564 in labor income, and 3) $725,187 in economic output.

Table 2: Estimated Annual Economic Impact on Buckingham County from the Ongoing Operation of the Riverstone Solar Project

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	5	$213,641	$569,784
2nd Round Indirect and Induced Economic Activity	1	$41,923	$155,403
Total Economic Activity	**6**	**$255,564**	**$725,187**

**Totals may not sum due to rounding.*

Results – Fiscal Impact

In this portion of the section, we quantify the direct fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County. We first estimate the additional revenue that the project would generate for the county over a 40-year period from the increased property assessments associated with reassessing the site as solar use property. We then describe the additional revenue that Riverstone Solar would generate for Buckingham County from a revenue share agreement between Riverstone Solar and Buckingham County based on the project's total generation capacity. Last, we illustrate the revenue that could be generated from taxes levied on the capital investment, which would be in place of a revenue share agreement.

Reassessment of Property

Table 3 details the increased property assessments associated with reassessing the 1,000-acre fenced-in site as solar use property. We estimate the county real estate tax revenue from the project after reassessment to be approximately $52,000 per year, for a cumulative total of approximately $2.1 million over the project's anticipated 40-year operational life expectancy.[29] In contrast, the property currently

[27] Data Source: Apex Clean Energy, Inc.
[28] Data Source: Apex Clean Energy, Inc.
[29] Assumes property will be reassessed at $10,000 per acre once it is under solar use.

generates approximately $7,594 per year in real estate tax revenue for the county, for a cumulative total of approximately $303,761 over 40 years.[30]

Table 3: Estimated County Revenue Generated by the Proposed Riverstone Solar Project over 40 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[31]	$10,000,000
Buckingham County Real Estate Tax Rate[32]	0.0052
Annual County Real Estate Tax – Solar Use	$52,000
Cumulative Revenue over 40 years	**$2,080,000**

Revenue Share Agreement

Calculation

In this section, we describe the additional annual revenue that the proposed Riverstone Solar project would generate for Buckingham County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636. The Virginia Code currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect on July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years. Section 58.1-2636 further stipulates that capital investment associated with the solar project will be exempt from taxation if the county and solar company enter into such a revenue share agreement.

Table 4 details the revenue generated from a revenue share agreement between Riverstone Solar and Buckingham County with the 10 percent escalator. Based on a total generation capacity of 149.5 MW AC and an assumed commissioning date in the fourth quarter of 2023, a revenue share agreement would generate approximately $12.7 million over the anticipated 40-year operational life of the project.

Table 4: Estimated County Revenue Generated from a Revenue Share Agreement over 40 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	149.5	$1,400	$209,300
2	149.5	$1,400	$209,300
3	149.5	$1,540	$230,230
4	149.5	$1,540	$230,230
5	149.5	$1,540	$230,230
6	149.5	$1,540	$230,230

[30] Derived from property card data provided by the Buckingham County Commissioner of Revenue's office.

[31] Calculated as 1,000 acres times $10,000 per acre.

[32] Data Source: Buckingham County Commissioner of Revenue's Office.

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
7	149.5	$1,540	$230,230
8	149.5	$1,694	$253,253
9	149.5	$1,694	$253,253
10	149.5	$1,694	$253,253
11	149.5	$1,694	$253,253
12	149.5	$1,694	$253,253
13	149.5	$1,863	$278,578
14	149.5	$1,863	$278,578
15	149.5	$1,863	$278,578
16	149.5	$1,863	$278,578
17	149.5	$1,863	$278,578
18	149.5	$2,050	$306,436
19	149.5	$2,050	$306,436
20	149.5	$2,050	$306,436
21	149.5	$2,050	$306,436
22	149.5	$2,050	$306,436
23	149.5	$2,255	$337,080
24	149.5	$2,255	$337,080
25	149.5	$2,255	$337,080
26	149.5	$2,255	$337,080
27	149.5	$2,255	$337,080
28	149.5	$2,480	$370,788
29	149.5	$2,480	$370,788
30	149.5	$2,480	$370,788
31	149.5	$2,480	$370,788
32	149.5	$2,480	$370,788
33	149.5	$2,728	$407,866
34	149.5	$2,728	$407,866
35	149.5	$2,728	$407,866
36	149.5	$2,728	$407,866
37	149.5	$2,728	$407,866
38	149.5	$3,001	$448,653
39	149.5	$3,001	$448,653
40	149.5	$3,001	$448,653
Cumulative Total			**$12,685,716**

**Totals may not sum due to rounding.*

Total Fiscal Impact

Table 5 combines the results from the calculations depicted in Tables 3 and 4 to provide an estimate of the cumulative fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over its 40-year anticipated operational life based on a revenue share agreement. As these data indicate, that cumulative total is approximately $14.8 million.

Table 5: Estimated Cumulative County Tax Revenue from the Proposed Riverstone Solar Project over 40 Years under a Revenue Share Agreement

County Real Estate Tax	$2,080,000
County Revenue from Revenue Share Agreement	$12,685,716
TOTAL Cumulative Revenue over 40 years with 10 Percent Escalator	**$14,765,716**

Composite Index

Under a revenue share agreement, by statute capital investment from the project has no impact on the locality's Composite Index.

Taxation of Capital Investment

Calculation

Table 6 separately details the additional annual revenue that the proposed Riverstone Solar project would generate for Buckingham County over a 40-year period from taxes levied on capital investment, replacing the revenues generated from a revenue share agreement described above. The calculation is based on: 1) the taxable portion of capital investments pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[33], times 2) the State Corporation Commission's 2021 utility assessment ratio of 0.955 for taxation of public utilities in Buckingham County, times 4) the State Corporation Commission's updated depreciation guidelines for solar facilities, times 5) Buckingham County's real property tax rate of $0.52 per $100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 6 indicate, based on these calculations we estimate that the additional county revenue from taxation of capital investments associated with the proposed Riverstone Solar project would be approximately $168,014 in the project's first year of operation, with that figure projected to decline to approximately $18,668 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $4.3 million.

[33] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes if the interconnection request was filed after July 1, 2018 (but before January 1, 2019).

Table 6: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years from Taxation of Capital Investment

Year	Total Capital Investment subject to Exemption[34]	Less Exemption[35]	Depreciation[36]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[37]
1	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
2	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
3	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
4	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
5	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
6	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
7	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
8	$187,960,000	$35,900,360	90.0%	$32,310,324	$168,014
9	$187,960,000	$35,900,360	89.7%	$32,199,033	$167,435
10	$187,960,000	$35,900,360	88.2%	$31,653,347	$164,597
11	$187,960,000	$35,900,360	86.6%	$31,075,352	$161,592
12	$187,960,000	$35,900,360	84.9%	$30,465,045	$158,418
13	$187,960,000	$35,900,360	83.1%	$29,818,839	$155,058
14	$187,960,000	$35,900,360	81.1%	$29,129,552	$151,474
15	$187,960,000	$35,900,360	79.1%	$28,400,775	$147,684
16	$187,960,000	$35,900,360	77.0%	$27,628,917	$143,670
17	$187,960,000	$35,900,360	74.7%	$26,810,389	$139,414
18	$187,960,000	$35,900,360	72.3%	$25,945,190	$134,915
19	$187,960,000	$35,900,360	69.7%	$25,022,551	$130,117
20	$187,960,000	$35,900,360	67.0%	$24,049,651	$125,058

[34] Data Source: Apex Clean Energy, Inc.
[35] Calculated pursuant to Virginia Code §58.1-3660 which stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes if the interconnection request was filed after July 1, 2018 (but before January 1, 2019). Also accounts fpr the State Corporation Commission's 2021 utility assessment ratio of 0.955 for taxation of public utilities in Buckingham County.
[36] Data Source: State Corporation Commission guidelines.
[37] Calculated pursuant to Virginia Code §58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Buckingham County's real property tax rate of $0.52 per $100 of assessed value.

Table 6: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years from Taxation of Capital Investment

Year	Total Capital Investment subject to Exemption[34]	Less Exemption[35]	Depreciation[36]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[37]
21	$187,960,000	$35,900,360	64.1%	$23,015,721	$119,682
22	$187,960,000	$35,900,360	61.1%	$21,920,760	$113,988
23	$187,960,000	$35,900,360	57.8%	$20,761,178	$107,958
24	$187,960,000	$35,900,360	54.4%	$19,529,796	$101,555
25	$187,960,000	$35,900,360	50.8%	$18,226,613	$94,778
26	$187,960,000	$35,900,360	46.9%	$16,840,859	$87,572
27	$187,960,000	$35,900,360	42.8%	$15,376,124	$79,956
28	$187,960,000	$35,900,360	38.5%	$13,821,639	$71,873
29	$187,960,000	$35,900,360	33.9%	$12,177,402	$63,322
30	$187,960,000	$35,900,360	29.1%	$10,429,055	$54,231
31	$187,960,000	$35,900,360	23.9%	$8,580,186	$44,617
32	$187,960,000	$35,900,360	18.4%	$6,620,026	$34,424
33	$187,960,000	$35,900,360	12.7%	$4,541,396	$23,615
34	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
35	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
36	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
37	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
38	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
39	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
40	$187,960,000	$35,900,360	10.0%	$3,590,036	$18,668
Cumulative Total					**$4,251,792**

Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over its 40-year anticipated operational life based on taxation of the capital investment. As these data indicate, that cumulative total is approximately $6.3 million.

Table 7: Estimated Cumulative County Tax Revenue from the Proposed Riverstone Solar Project over 40 Years from Taxation of Capital Investment

County Real Estate Tax	$2,080,000
County Revenue from Taxation of Capital Investments	$4,251,792
TOTAL Cumulative Revenue over 40 Years	**$6,331,792**

Composite Index

In this portion of the section, we present an analysis of the hypothetical upper limit of the impact that the proposed Riverstone Solar project could have on Buckingham County's Composite Index, the index that the Virginia Department of Education uses to assess the locally funded portion of a locality's school budget based on "ability to pay." We include this analysis in our report because it has been a perceived issue in some localities in Virginia when proposed solar projects have been considered.

Each locality's Composite Index is based on three factors – the locality's total real property tax base, total adjusted real income, and total taxable retail sales. Of these, the total real property tax base receives the highest weight. Therefore, hypothetically, a large capital investment such as a solar facility could increase a locality's Composite Index and thereby increase the required local contribution to the county's school budget. However, there are two important issues to keep in mind when evaluating the likely impact of a solar project on a locality's Composite Index.

First, when calculating a locality's Composite Index, solar projects are treated no differently than manufacturing facilities, residential neighborhoods, or any other large capital investment. The part of the investment that is taxable is included in the real property tax base portion of the calculation. Pursuant to Virginia Code §58.1-3660, that means for solar facilities over 20MW and under 150MW the 20 percent of the investment that is taxable is considered in the Composite Index, and only that 20 percent.

Second, changes in a locality's Composite Index are driven by changes in a locality's total real property tax base (along with total adjusted real income and total taxable retail sales) relative to the changes in all Virginia localities total real property tax base (along with total adjusted real income and total taxable retail sales). As a result, for any one capital investment to have an impact on a locality's Composite Index, it would have to drive a percentage change in the locality's total real property tax base that was larger than the percentage change in the total real property tax base across all Virginia localities.

Between the Virginia Department of Education's 2018-20 and 2020-22 Composite Index calculations, the total real property tax base across all Virginia localities increased by 7.3 percent. Even after accounting for both the capital investment in the project itself and the increased property value assessments associated with rezoning the property to solar use, the proposed Riverstone Solar project would only drive a 1.9 percent increase in Buckingham County's total real property tax base. This means that, in and of itself, it is unlikely the proposed Riverstone Solar project would effect a meaningful change in Buckingham County's Composite Index.

However, consistent with reports we have produced for other Virginia localities, Table 8 provides an estimate of the hypothetical upper limit of the impact that the proposed Riverstone Solar project could have on Buckingham County's Composite Index and the county's share of its school budget over a 40-year period, holding all other changes to the county's property tax base and the property tax base of all other Virginia localities constant.

The calculation presented in Table 8 is derived by: 1) using baseline data for Buckingham County on County Taxable Real Property, Adjusted Gross Income, Taxable Retail Sales, County School Average Daily Membership (ADM), and County Population from the Virginia Department of Education's 2020-2022 Composite Index of Local Ability to Pay, 2) adjusting County Taxable Real Property in subsequent years for the estimated net increase in real estate assessments from solar use (the estimated increase in property value from solar use presented in Table 3 less the property's current assessed value), plus the "Depreciated Value of Taxable Capital Investment" figures from Table 4, and 3) applying those figures to the Virginia Department of Education's Composite Index formula to compute a revised Composite Index for Buckingham County in each subsequent year.[38]

That revised Composite Index is then applied to Buckingham County's baseline FY 2020 locally funded school budget as reported by the Virginia Auditor of Public Accounts to derive a hypothetical upper limit of the additional local school funding that could be required in each subsequent year relative to the baseline, if one holds all other changes to the county's property tax base and the property tax base of all other Virginia localities constant.

[38] The Virginia Department of Education's composite index formula is: (0.5*(((0.66)*((County Taxable Real Property/County School ADM)/(State Taxable Real Property/State School ADM))+((0.33)*((County Taxable Real Property/County Population)/(State Taxable Real Property/State Population)))))+(0.4*(((0.66)*((County Adjusted Gross Income/County School ADM)/(State Adjusted Gross Income/State School ADM)))+((0.33)*((County Adjusted Gross Income/County Population)/(State Adjusted Gross Income/State Population)))))+(0.1*(((0.66)*((County Taxable Retail Sales/County School ADM)/(State Taxable Retail Sales/State School ADM)))+((0.33)* ((County Taxable Retail Sales/County Population)/(State Taxable Retail Sales/State Population))))).

Table 8: Hypothetical Upper Limit to Change in Composite Index and Required Local Contribution to School Budget from the proposed Riverstone Solar Project over 40 Years

Year	County Taxable Real Property[39]	Increased Property Valuation from Solar Use	Taxable Proposed Capital Investment[40]	Adj. County Taxable Real Property	Adj. Gross Income[41]	Taxable Retail Sales[42]	County School ADM[43]	County Pop.[44]	Comp. Index[45]	Locally Funded School Budget[46]	Change in Locally Funded School Budget
Baseline	**$2,191,369,035**				**$245,258,412**	**$57,962,896**	**1,950**	**16,957**	**0.3422**	**$7,200,133**	**$0**
1	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
2	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
3	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
4	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
5	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
6	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
7	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
8	$2,191,369,035	$8,539,609	$32,310,324	$2,232,218,968	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,435	$91,302
9	$2,191,369,035	$8,539,609	$32,199,033	$2,232,107,677	$245,258,412	$57,962,896	1,950	16,957	0.3465	$7,291,186	$91,053
10	$2,191,369,035	$8,539,609	$31,653,347	$2,231,561,991	$245,258,412	$57,962,896	1,950	16,957	0.3464	$7,289,966	$89,833
11	$2,191,369,035	$8,539,609	$31,075,352	$2,230,983,996	$245,258,412	$57,962,896	1,950	16,957	0.3464	$7,288,675	$88,542
12	$2,191,369,035	$8,539,609	$30,465,045	$2,230,373,690	$245,258,412	$57,962,896	1,950	16,957	0.3463	$7,287,311	$87,178
13	$2,191,369,035	$8,539,609	$29,818,839	$2,229,727,483	$245,258,412	$57,962,896	1,950	16,957	0.3462	$7,285,866	$85,733
14	$2,191,369,035	$8,539,609	$29,129,552	$2,229,038,196	$245,258,412	$57,962,896	1,950	16,957	0.3462	$7,284,326	$84,193
15	$2,191,369,035	$8,539,609	$28,400,775	$2,228,309,419	$245,258,412	$57,962,896	1,950	16,957	0.3461	$7,282,697	$82,564
16	$2,191,369,035	$8,539,609	$27,628,917	$2,227,537,561	$245,258,412	$57,962,896	1,950	16,957	0.3460	$7,280,972	$80,839

[39] Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.
[40] Data Source: From Table 6.
[41] Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.
[42] Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.
[43] Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.
[44] Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.
[45] Data Source: Baseline data taken from the Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay. Subsequent annual calculations are based on the Adjusted County Taxable Real Property, Adjusted Gross Income, County School Average Daily Membership (ADM), and County Population data presented for each year.
[46] Data Source: Virginia Auditor of Public Accounts.

Table 8: Hypothetical Upper Limit to Change in Composite Index and Required Local Contribution to School Budget from the proposed Riverstone Solar Project over 40 Years

Year	County Taxable Real Property[39]	Increased Property Valuation from Solar Use	Taxable Proposed Capital Investment[40]	Adj. County Taxable Real Property	Adj. Gross Income[41]	Taxable Retail Sales[42]	County School ADM[43]	County Pop.[44]	Comp. Index[45]	Locally Funded School Budget[46]	Change in Locally Funded School Budget
17	$2,191,369,035	$8,539,609	$26,810,389	$2,226,719,033	$245,258,412	$57,962,896	1,950	16,957	0.3459	$7,279,142	$79,009
18	$2,191,369,035	$8,539,609	$25,945,190	$2,225,853,834	$245,258,412	$57,962,896	1,950	16,957	0.3458	$7,277,208	$77,075
19	$2,191,369,035	$8,539,609	$25,022,551	$2,224,931,195	$245,258,412	$57,962,896	1,950	16,957	0.3457	$7,275,146	$75,013
20	$2,191,369,035	$8,539,609	$24,049,651	$2,223,958,295	$245,258,412	$57,962,896	1,950	16,957	0.3456	$7,272,972	$72,839
21	$2,191,369,035	$8,539,609	$23,015,721	$2,222,924,365	$245,258,412	$57,962,896	1,950	16,957	0.3455	$7,270,661	$70,528
22	$2,191,369,035	$8,539,609	$21,920,760	$2,221,829,404	$245,258,412	$57,962,896	1,950	16,957	0.3454	$7,268,214	$68,081
23	$2,191,369,035	$8,539,609	$20,761,178	$2,220,669,822	$245,258,412	$57,962,896	1,950	16,957	0.3453	$7,265,622	$65,489
24	$2,191,369,035	$8,539,609	$19,529,796	$2,219,438,440	$245,258,412	$57,962,896	1,950	16,957	0.3451	$7,262,870	$62,737
25	$2,191,369,035	$8,539,609	$18,226,613	$2,218,135,257	$245,258,412	$57,962,896	1,950	16,957	0.3450	$7,259,957	$59,824
26	$2,191,369,035	$8,539,609	$16,840,859	$2,216,749,503	$245,258,412	$57,962,896	1,950	16,957	0.3449	$7,256,860	$56,727
27	$2,191,369,035	$8,539,609	$15,376,124	$2,215,284,768	$245,258,412	$57,962,896	1,950	16,957	0.3447	$7,253,586	$53,453
28	$2,191,369,035	$8,539,609	$13,821,639	$2,213,730,283	$245,258,412	$57,962,896	1,950	16,957	0.3445	$7,250,112	$49,979
29	$2,191,369,035	$8,539,609	$12,177,402	$2,212,086,046	$245,258,412	$57,962,896	1,950	16,957	0.3444	$7,246,437	$46,304
30	$2,191,369,035	$8,539,609	$10,429,055	$2,210,337,699	$245,258,412	$57,962,896	1,950	16,957	0.3442	$7,242,529	$42,396
31	$2,191,369,035	$8,539,609	$8,580,186	$2,208,488,830	$245,258,412	$57,962,896	1,950	16,957	0.3440	$7,238,397	$38,264
32	$2,191,369,035	$8,539,609	$6,620,026	$2,206,528,670	$245,258,412	$57,962,896	1,950	16,957	0.3438	$7,234,016	$33,883
33	$2,191,369,035	$8,539,609	$4,541,396	$2,204,450,040	$245,258,412	$57,962,896	1,950	16,957	0.3436	$7,229,370	$29,237
34	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
35	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
36	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
37	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
38	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
39	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
40	$2,191,369,035	$8,539,609	$3,590,036	$2,203,498,680	$245,258,412	$57,962,896	1,950	16,957	0.3435	$7,227,243	$27,110
TOTAL											**$2,590,958**

As shown in Table 8, based on these calculations, we estimate the hypothetical upper limit of the additional local school funding that could be required as a result of the proposed Riverstone Solar project's addition to Buckingham County's real property tax base to be approximately $91,302 in the project's first year of operation with that figure projected to decline to approximately $27,110 in the project's 34th year of operation and thereafter as the value of the proposed capital investments is further depreciated for a cumulative total of approximately $2.6 million.

Table 9 combines the results from the calculations depicted in Table 7 and 8 to provide an estimate of the fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over 40 years. As these data indicate, even taking into account the hypothetical upper limit of the additional local school funding that could be required as a result of the proposed Riverstone Solar project's increase to Buckingham County's real property tax base, we estimate the cumulative net county revenue from the project to be approximately $3.7 million over its anticipated 40-year operational life expectancy.

Table 9: Estimated County Tax Revenue Generated by the Proposed Riverstone Solar project over 40 Years, taking into account Hypothetical Upper Limit of Effect on Composite Index

Cumulative Revenue over 40 Years	$6,331,792
Hypothetical Upper Limit of Effect on Composite Index	($2,590,958)
Net Revenue over 40 Years	**$3,740,834**

Current Agricultural Use

In this section, we provide a benchmark for the previous estimates of the economic contribution that the proposed Riverstone Solar project would make to Buckingham County by estimating the economic and fiscal contribution that the site makes to the county in its current agricultural use. In conducting that analysis, we employ the following assumptions:

- The proposed Riverstone Solar project would be situated on an approximate 1,000-acre tract of actively managed timberland.
- Average annual revenue per acre for Buckingham County timberland is approximately $250.24.[47]
- Real property tax payments by current landowners to Buckingham County are approximately $7,594 each year.[48]

[47] Data Source: Estimated based on data from the U.S. Department of Agriculture 2017 Census and industry data from IMPLAN Group, LLC.
[48] Data Source: Derived from property card data provided by the Buckingham County Commissioner of Revenue's office. Includes value of timber.

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic and fiscal impact. As shown in Table 10, in a timber production use we estimate that the proposed Riverstone Solar project site directly supports approximately: 1) 3 jobs, 2) $171,075 in labor income, and 3) $250,244 in economic output to Buckingham County.

Taking into account the economic ripple effects that direct impact generates, we estimate that on average, the total annually supported impact on Buckingham County is approximately: 1) 4 jobs, 2) $203,983 in labor income, 3) $334,500 in economic output, and 4) $7,594 in direct real property tax payments to Buckingham County, for a cumulative total of $303,761 over 40 years.

Table 10: Total Estimated Annual Economic Impact of the Riverstone Solar Project Site on Buckingham County – Current Agricultural Use

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	3	$171,075	$250,244
2nd Round Indirect and Induced Economic Activity	1	$32,909	$84,256
Total Economic Activity	**4**	**$203,983**	**$334,500**
Fiscal Impact			
Local Tax Revenue			$7,594
TOTAL Cumulative Local Tax Revenue over 40 Years			**$303,761**

**Totals may not sum due to rounding.*

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

3.10. Property Value Impact Study

Kirkland Appraisals, LLC

Richard C. Kirkland, Jr., MAI
9408 Northfield Court
Raleigh, North Carolina 27603
Phone (919) 414-8142
rkirkland2@gmail.com
www.kirklandappraisals.com

August 3, 2021

Mr. Jimmy Merrick
Riverstone Solar, LLC
310 4th Street NE, Suite 300
Charlottesville, VA 22902

RE: Riverstone Solar Project – Property Value Impact Study

Mr. Merrick

At your request, I have considered the impact of a solar farm proposed to be constructed on a portion of a 1,996-acre assemblage of land off Bridgeport Road, Arvonia, Buckingham County, Virginia. Specifically, I have been asked to give my professional opinion on whether the proposed solar farm will have any impact on adjoining property value and whether "the location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located."

To form an opinion on these issues, I have researched and visited existing and proposed solar farms in Virginia as well as other states, researched articles through the Appraisal Institute and other studies, and discussed the likely impact with other real estate professionals. I have not been asked to assign any value to any specific property.

This letter is a limited report of a real property appraisal consulting assignment and subject to the limiting conditions attached to this letter. My client is Riverstone Solar, LLC, represented to me by Mr. Jimmy Merrick. My findings support the Application. The effective date of this consultation is August 3, 2021.

Conclusion

The adjoining properties are well set back from the proposed solar panels and most of the site has good existing landscaping for screening the proposed solar farm. Additional supplemental vegetation is proposed along the right of way where no vegetation is currently located.

The matched pair analysis shows no impact on home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land where the solar farm is properly screened and buffered. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar farm is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

Data from the university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar farm with proper setbacks and landscaped buffers.

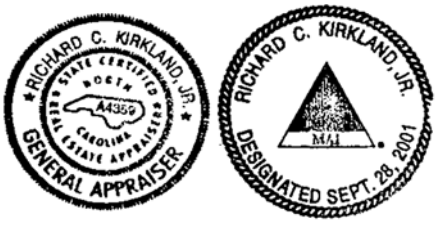
Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those

findings of no impact have been upheld by appellate courts. Similar solar farms have been approved with adjoining agricultural uses, schools, churches, and residential developments.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting properties and that the proposed use is in harmony with the area in which it is located. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is minimal traffic.

If you have any questions, please let me know.

Sincerely,



Richard C. Kirkland, Jr., MAI
NC Certified General Appraiser #A4359
VA Certified General Appraiser # 4001017291

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I. Proposed Project and Adjoining Uses

Proposed Use Description

This 149.5 MW solar farm is proposed to be constructed on a portion of a 1,996-acre assemblage of land off Bridgeport Road, Arvonia, Buckingham County, Virginia. Adjoining land is a mix of residential and agricultural uses, which is very typical of solar farm sites.

Adjoining Properties

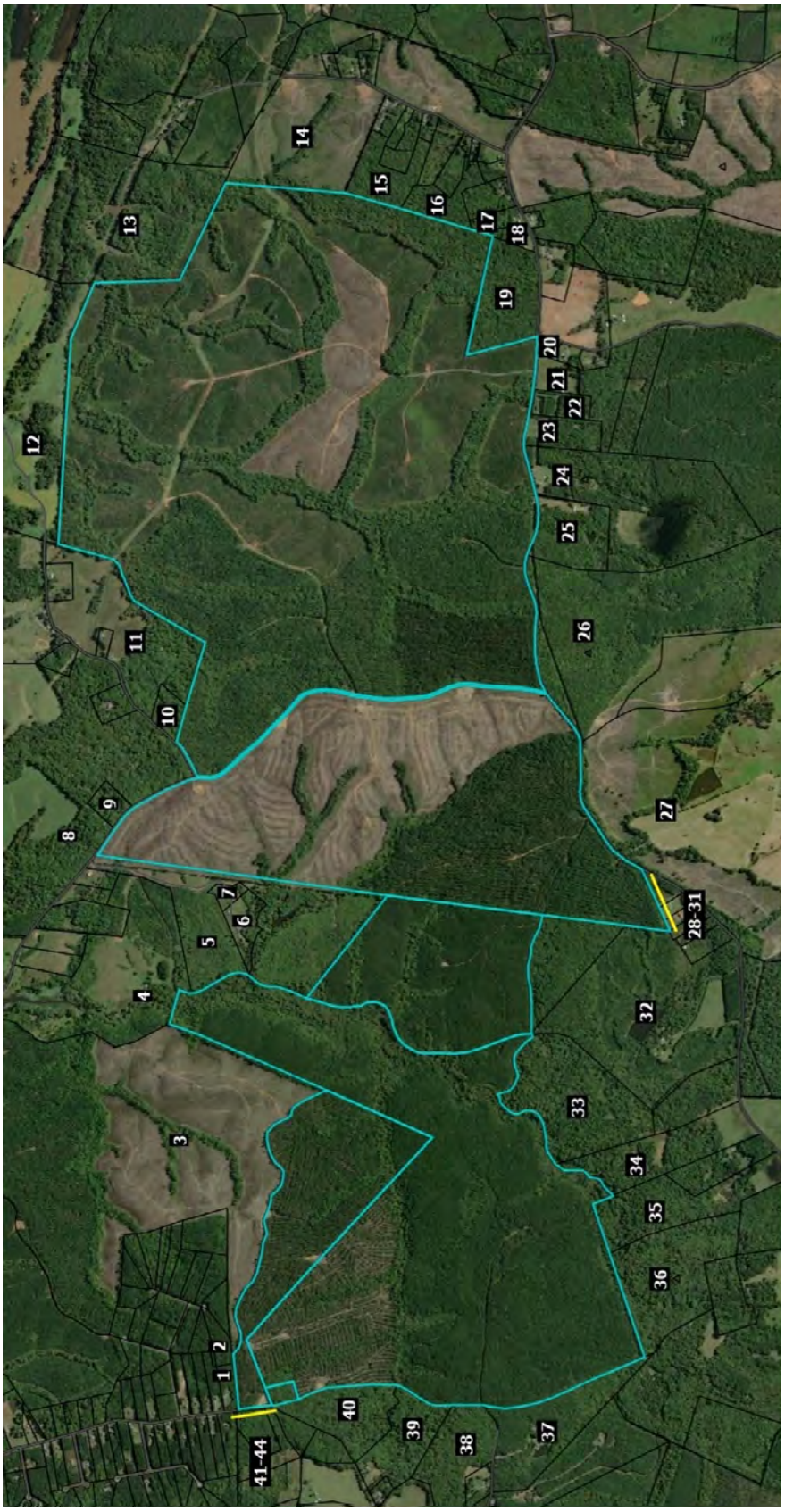
I have considered adjoining uses and included a map to identify each parcel's location. The closest adjoining home will be 355 feet from the closest solar panel and the average distance to adjoining homes will be 861 feet to the nearest solar panel. Most of these setbacks are much further than typical.

The subject property is planned to maintain existing vegetation where possible around the entire property. A planted screening will be placed along existing right of ways where vegetation does not exist.

The breakdown of those uses by acreage and number of parcels is summarized below.

Adjoining Use Breakdown

	Acreage	**Parcels**
Residential	5.07%	50.00%
Agricultural	84.89%	38.64%
Agri/Res	10.04%	11.36%
Total	**100.00%**	**100.00%**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Surrounding Uses

#	MAP ID	Owner	GIS Data Acres	Present Use	Adjoin Acres	Adjoin Parcels	Distance (ft) Home/Panel
1	17-1-33	Weidman	3.14	Residential	0.12%	2.27%	395
2	17-1-61	JT Enterprises	3.85	Residential	0.15%	2.27%	N/A
3	17-10	Foster	304.90	Agricultural	11.67%	2.27%	N/A
4	10-6-1	Payne	87.76	Agricultural	3.36%	2.27%	N/A
5	17-2-7	Moss	71.17	Agricultural	2.72%	2.27%	N/A
6	17-2-6	Franz	6.59	Residential	0.25%	2.27%	1,020
7	17-2-6B	Moss	2.50	Residential	0.10%	2.27%	355
8	10-26	Wilmoth	234.10	Agricultural	8.96%	2.27%	N/A
9	17-18C	Wilmoth	5.00	Residential	0.19%	2.27%	N/A
10	17-18D	Ludovissy	5.00	Residential	0.19%	2.27%	N/A
11	17-18	Wilmoth	212.70	Agricultural	8.14%	2.27%	N/A
12	11-2	ZunZ	165.56	Agricultural	6.34%	2.27%	N/A
13	18-1	Smith	96.20	Agricultural	3.68%	2.27%	N/A
14	18-23	BTG	108.00	Agricultural	4.13%	2.27%	N/A
15	18-19	Chambers	20.00	Residential	0.77%	2.27%	N/A
16	18-16	Harris	11.53	Residential	0.44%	2.27%	1,795
17	18-10	Hutcherson	16.91	Residential	0.65%	2.27%	1,415
18	18-10A	Hutcherson	3.00	Residential	0.11%	2.27%	1,235
19	18-7	Taggart	29.00	Agricultural	1.11%	2.27%	N/A
20	18-1-3	Moseley	2.00	Residential	0.08%	2.27%	395
21	18-1-2	Marshall	6.37	Residential	0.24%	2.27%	570
22	18-1-1	Ozmar	7.00	Residential	0.27%	2.27%	N/A
23	18-6	Parson	10.00	Residential	0.38%	2.27%	355
24	18-4	Cobb	75.60	Agri/Res	2.89%	2.27%	380
25	18-3	Dunkum	24.40	Agri/Res	0.93%	2.27%	775
26	17-16	Bolling	170.00	Agricultural	6.51%	2.27%	N/A
27	27-12	Alvis Properties	496.13	Agricultural	18.99%	2.27%	N/A
28	27-10F	Al Asset	3.01	Residential	0.12%	2.27%	N/A
29	27-10E	McCauley	2.00	Residential	0.08%	2.27%	510
30	27-10D	Ford	2.00	Residential	0.08%	2.27%	705
31	27-10C	Al Asset	2.00	Residential	0.08%	2.27%	N/A
32	27-10	Reider	104.29	Agri/Res	3.99%	2.27%	1,835
33	17-15	Cook	68.00	Agricultural	2.60%	2.27%	N/A
34	17-14	Cook	40.00	Agricultural	1.53%	2.27%	N/A
35	27-7	Cook	39.06	Agricultural	1.49%	2.27%	N/A
36	27-3	Ford	47.00	Agricultural	1.80%	2.27%	N/A
37	17-7	Secada	36.30	Agri/Res	1.39%	2.27%	645
38	16-86	Dorrier	24.90	Agricultural	0.95%	2.27%	N/A
39	17-5	Dorrier	21.70	Agri/Res	0.83%	2.27%	1,250
40	17-6A	Dorrier	23.60	Agricultural	0.90%	2.27%	N/A
41	17-3A	Dorrier	2.64	Residential	0.10%	2.27%	N/A
42	17-3B	Dorrier	8.05	Residential	0.31%	2.27%	N/A
43	17-3	Dorrier	6.00	Residential	0.23%	2.27%	1,015
44	17-1-32	Dufort	3.84	Residential	0.15%	2.27%	850
		Total	**2612.800**		**100.00%**	**100.00%**	861

II. Methodology and Discussion of Issues

Standards and Methodology

I conducted this analysis using the standards and practices established by the Appraisal Institute and that conform to the Uniform Standards of Professional Appraisal Practice. The analyses and methodologies contained in this report are accepted by all major lending institutions, and they are used in Virginia and across the country as the industry standard by certified appraisers conducting appraisals, market analyses, or impact studies and are considered adequate to form an opinion of the impact of a land use on neighboring properties. These standards and practices have also been accepted by the courts at the trial and appellate levels and by federal courts throughout the country as adequate to reach conclusions about the likely impact a use will have on adjoining or abutting properties.

The aforementioned standards compare property uses in the same market and generally within the same calendar year so that fluctuating markets do not alter study results. Although these standards do not require a linear study that examines adjoining property values before and after a new use (e.g. a solar farm) is developed, some of these studies do in fact employ this type of analysis. Comparative studies, as used in this report, are considered an industry standard.

The type of analysis employed is a Matched Pair Analysis or Paired Sales Analysis. This methodology is outlined in **The Appraisal of Real Estate**, Twelfth Edition by the Appraisal Institute pages 438-439. It is further detailed in **Real Estate Damages**, Third Edition, pages 33-36 by Randall Bell PhD, MAI. Paired sales analysis is used to support adjustments in appraisal work for factors ranging from the impact of having a garage, golf course view, or additional bedrooms. It is an appropriate methodology for addressing the question of impact of an adjoining solar farm. The paired sales analysis is based on the theory that when two properties are in all other respects equivalent, a single difference can be measured to indicate the difference in price between them. Dr. Bell describes it as comparing a test area to control areas. In the example provided by Dr. Bell he shows five paired sales in the test area compared to 1 to 3 sales in the control areas to determine a difference. I have used 3 sales in the control areas in my analysis for each sale developed into a matched pair.

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does not mean the use will be an external obsolescence, but a combination of these factors tends to be present when market data reflects that a use is an external obsolescence.

External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:

1) Traffic. Solar Farms are not traffic generators.

2) Odor. Solar farms do not produce odor.

3) Noise. Solar farms generate no noise concerns and are silent at night.

4) Environmental. Solar farms do not produce toxic or hazardous waste. Grass is maintained underneath the panels so there is minimal impervious surface area.

5) Appearance/Viewshed. This is the one area that potentially applies to solar farms. However, solar farms are generally required to provide significant setbacks and landscaping buffers to address that concern. Furthermore, any consideration of appearance of viewshed impacts has to be considered in comparison with currently allowed uses on that site. For example if a residential subdivision is already an allowed use, the question becomes in what way does the appearance impact adjoining property owners above and beyond the appearance of that allowed subdivision or other similar allowed uses.

6) Other factors. I have observed and studied many solar farms and have never observed any characteristic about such facilities that prevents or impedes neighbors from fully using their homes or farms or businesses for the use intended.

Relative Solar Farm Sizes

Solar farms have been increasing in size in recent years. Much of the data collected is from existing, older solar farms of smaller size, but there are numerous examples of sales adjoining 75 to 80 MW facilities that show a similar trend as the smaller solar farms. This is understandable given that the primary concern relative to a solar farm is the appearance or view of the solar farm, which is typically addressed through setbacks and landscaping buffers. The relevance of data from smaller solar farms to larger solar farms is due to the primary question being one of appearance. If the solar farm is properly screened, then little of the solar farm would be seen from adjoining property regardless of how many acres are involved.

Larger solar farms are often set up in sections where any adjoining owner would only be able to see a small section of the project even if there were no landscaping screen. Once a landscaping screen is in place, the primary view is effectively the same whether adjoining a 5 MW, 20 MW or 100 MW facility.

I have split out the data for the matched pairs adjoining larger solar farms only to illustrate the similarities later in this report.

Steps Involved in the Analysis

The paired sales analysis employed in this report follows the following process:

1. Identify sales of property adjoining existing solar farms.
2. Compare those sales to similar property that does not adjoin an existing solar farm.
3. Confirmation of sales are noted in the analysis write ups.
4. Distances from the homes to panels are included as a measure of the setbacks.
5. Topographic differences across the solar farms themselves are likewise noted along with demographic data for comparing similar areas.

There are a number of Sale/Resale comparables included in the write ups, but most of the data shown is for sales of homes after a solar farm has been announced (where noted) or after a solar farm has been constructed.

III. Research on Solar Farms

A. Appraisal Market Studies

I have also considered a number of impact studies completed by other appraisers as detailed below.

CohnReznick – Property Value Impact Study: Adjacent Property Values Solar Impact Study: A Study of Eight Existing Solar Facilities

Patricia McGarr, MAI, CRE, FRICS, CRA and Andrew R. Lines, MAI with CohnReznick completed an impact study for a proposed solar farm in Cheboygan County, Michigan completed on June 10, 2020. I am familiar with this study as well as a number of similar such studies completed by CohnReznick. I have not included all of these studies but I submit this one as representative of those studies.

This study addresses impacts on value from eight different solar farms in Michigan, Minnesota, Indiana, Illinois, Virginia and North Carolina. These solar farms are 19.6 MW, 100 MW, 11.9 MW, 23 MW, 71 MW, 61 MW, 40 MW, and 19 MW for a range from 11.9 MW to 100 MW with an average of 31 MW and a median of 31.5 MW. They analyzed a total of 24 adjoining property sales in the Test Area and 81 comparable sales in the Control Area over a five-year period.

The conclusion of this study is that there is no evidence of any negative impact on adjoining property values based on sales prices, conditions of sales, overall marketability, potential for new development or rate of appreciation.

Christian P. Kaila & Associates – Property Impact Analysis – Proposed Solar Power Plant Guthrie Road, Stuarts Draft, Augusta County, Virginia

Christian P. Kaila, MAI, SRA and George J. Finley, MAI developed an impact study as referenced above dated June 16, 2020. This was for a proposed 83 MW facility on 886 acres.

Mr. Kaila interviewed appraisers who had conducted studies and reviewed university studies and discussed the comparable impacts of other development that was allowed in the area for a comparative analysis of other impacts that could impact viewshed based on existing allowed uses for the site. He also discussed in detail the various other impacts that could cause a negative impact and how solar farms do not have such characteristics.

Mr. Kaila also interviewed county planners and real estate assessors in eight different Virginia counties with none of the assessor's identifying any negative impacts observed for existing solar projects.

Mr. Kaila concludes on a finding of no impact on property values adjoining the indicated solar farm.

Fred Beck, MAI, CCIM – Impact Analysis in Lincoln County 2013

Mr. Fred Beck, MAI, CCIM completed an impact analysis in 2013 for a proposed solar farm that concluded on a negative impact on value. That report relied on a single cancelled contract for an adjoining parcel where the contracted buyers indicated that the solar farm was the reason for the cancellation. It also relied on the activities of an assessment impact that was applied in a nearby county.

Mr. Beck was interviewed as part of the Christian Kalia study noted above. From that I quote "Mr. Beck concluded on no effect on moderate priced homes, and only a 5% change in his limited research of higher priced homes. His one sale that fell through is hardly a reliable sample. It also

was misleading on Mr. Beck's part to report the lower re-assessments since the primary cause of the re-assessments were based on the County Official, who lived adjacent to the solar farm, appeal to the assessor for reductions with his own home." In that Clay County Case study the noted lack of lot sales after announcement of the solar farm also coincided with the recession in 2008/2009 and lack of lot sales effectively defined that area during that time.

I further note, that I was present at the hearing where Mr. Beck presented these findings and the predominance of his argument before the Lincoln County Board of Commissioner's was based on the one cancelled sale as well as a matched pair analysis of high-end homes adjoining a four-story call center. He hypothesized that a similar impact from that example could be compared to being adjacent solar farm without explaining the significant difference in view, setbacks, landscaping, traffic, light, and noise. Furthermore, Mr. Beck did have matched pairs adjoining a solar farm in his study that he put in the back of his report and then ignored as they showed no impact on property value.

Also noted in the Christian Kalia interview notes is a response from Mr. Beck indicating that in his opinion "the homes were higher priced homes and had full view of the solar farm." Based on a description of screening so that "the solar farm would not be in full view to adjoining property owners. Mr. Beck said in that case, he would not see any drop in property value."

NorthStar Appraisal Company – Impact Analysis for Nichomus Run Solar, Pilesgrove, NJ, September 16, 2020

Mr. William J. Sapio, MAI with NorthStar Appraisal Company considered a matched pair analysis for the potential impact on adjoining property values to this proposed 150 MW solar farm. Mr. Sapio considered sales activity in a subdivision known as Point of Woods in South Brunswick Township and identified two recent new homes that were constructed and sold adjoining a 13 MW solar farm and compared them to similar homes in that subdivision that did not adjoin the solar farm. These homes sold in the $1,290,450 to $1,336,613 price range and these homes were roughly 200 feet from the closest solar panel.

Based on this analysis, he concluded that the adjoining solar farm had no impact on adjoining property value.

Conclusion of Impact Studies

Of the four studies noted two included actual sales data to derive an opinion of no impact on value. The only study to conclude on a negative impact was the Fred Beck study based on no actual sales data, and he has since indicated that with landscaping screens he would not conclude on a negative impact.

I have relied on these studies as additional support for the findings in this impact analysis.

B. Articles

I have also considered a number of articles on this subject as well as conclusions and analysis as noted below.

Farm Journal Guest Editor, March 22, 2021 – Solar's Impact on Rural Property Values

Andy Ames, ASFMRA (American Society of Farm Managers and Rural Appraisers) published this article that includes a discussion of his survey of appraisers and studies on the question of property value related to solar farms. He discusses the university studies that I have cited as well as Patricia McGarr, MAI.

He also discusses the findings of Donald A. Fisher, ARA, who served six years at the Chair of the ASFMRA's National Appraisal Review Committee. He is also the Executive Vice President of the CNY Pomeroy Appraiser and has conducted several market studies on solar farms and property impact. He is quoted in the article as saying, "Most of the locations were in either suburban or rural areas, and all of those studies found either a neutral impact, or ironically, a positive impact, where values on properties after installation of solar farms went up higher than time trends."

Howard Halderman, AFM, President and CEO of Halderman Real Estate and Farm Management attended the ASFMRA solar talk hosted by the Indiana Chapter of the ASFMRA and he concludes that other rural properties would likely see no impact and farmers and landowners shown even consider possible benefits. "In some cases, farmers who rent land to a solar company will insure the viability of their farming operation for a longer time period. This makes them better long-term tenants or land buyers so one can argue that higher rents and land values will follow due to the positive impact the solar leases offer."

National Renewable Energy Laboratory – Top Five Large-Scale Solar Myths, February 3, 2016

Megan Day reports form NREL regarding a number of concerns neighbors often express. Myth #4 regarding property value impacts addresses specifically the numerous studies on wind farms that show no impact on property value and that solar farms have a significantly reduced visual impact from wind farms. She highlights that the appearance can be addressed through mitigation measures to reduce visual impacts of solar farms through vegetative screening. Such mitigations are not available to wind farms given the height of the windmills and again, those studies show no impact on value adjoining wind farms.

North Carolina State University: NC Clean Energy Technology Center White Paper: Balancing Agricultural Productivity with Ground-Based Solar Photovoltaic (PV) Development (Version 2), May 2019

Tommy Cleveland and David Sarkisian wrote a white paper for NCSU NC Clean Energy Technology Center regarding the potential impacts to agricultural productivity from a solar farm use. I have interviewed Tommy Cleveland on numerous occasions and I have also heard him speak on these issues at length as well. He addresses many of the common questions regarding how solar farms work and a detailed explanation of how solar farms do not cause significant impacts on the soils, erosion and other such concerns. This is a heavily researched paper with the references included.

North Carolina State University: NC Clean Energy Technology Center White Paper: Health and Safety Impacts of Solar Photovoltaics, May 2017

Tommy Cleveland wrote a white paper for NCSU NC Clean Energy Technology Center regarding the health and safety impacts to address common questions and concerns related to solar farms. This is a heavily researched white paper addressing questions ranging from EMFs, fire safety, as well as vegetation control and the breakdown of how a solar farm works.

C. Broker Commentary

In the process of working up the matched pairs used later in this report, I have collected comments from brokers who have actually sold homes adjoining solar farms indicating that the solar farm had no impact on the marketing, timing, or sales price for the adjoining homes. I have comments from 12 such brokers within this report including brokers from Kentucky, Virginia, Tennessee, and North Carolina.

I have additional commentary from other states including New Jersey and Michigan that provide the same conclusion.

IV. University Studies

I have also considered the following studies completed by four different universities related to solar farms and impacts on property values.

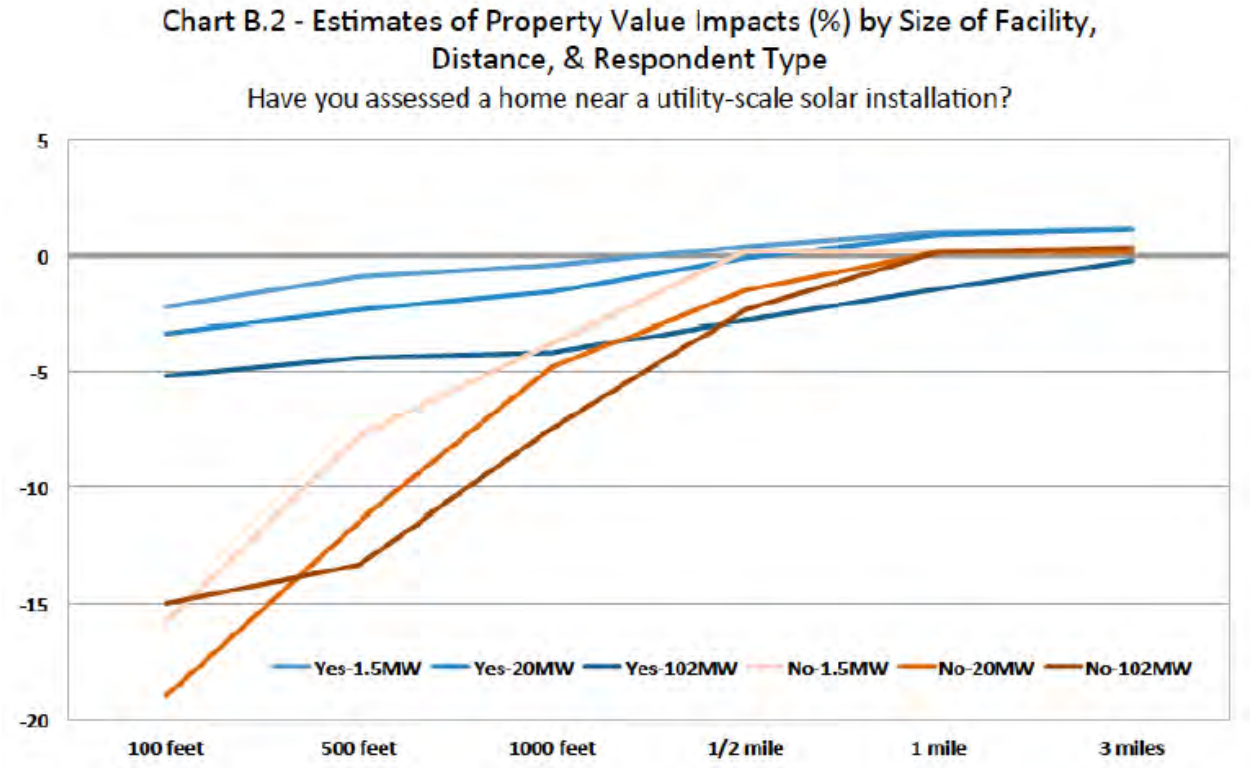
A. University of Texas at Austin, May 2018

An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations

This study considers solar farms from two angles. First it looks at where solar farms are being located and concludes that they are being located primarily in low density residential areas where there are fewer homes than in urban or suburban areas.

The second part is more applicable in that they conducted a survey of appraisers/assessors on their opinions of the possible impacts of proximity to a solar farm. They consider the question in terms of size of the adjoining solar farm and how close the adjoining home is to the solar farm. I am very familiar with this part of the study as I was interviewed by the researchers multiple times as they were developing this. One very important question that they ask within the survey is very illustrative. They asked if the appraiser being surveyed had ever appraised a property next to a solar farm. There is a very noticeable divide in the answers provided by appraisers who have experience appraising property next to a solar farm versus appraisers who self-identify as having no experience or knowledge related to that use.

On Page 16 of that study they have a chart showing the responses from appraisers related to proximity to a facility and size of the facility, but they separate the answers as shown below with appraisers with experience in appraising properties next to a solar farm shown in blue and those inexperienced shown in brown. Even within 100 feet of a 102 MW facility the response from experienced appraisers were -5% at most on impact. While inexperienced appraisers came up with significantly higher impacts. This chart clearly shows that an uninformed response widely diverges from the sales data available on this subject.



Furthermore, the question cited above does not consider any mitigating factors such as landscaping buffers or screens which would presumably reduce the minor impacts noted by experienced appraisers on this subject.

The conclusion of the researchers is shown on Page 23 indicated that "Results from our survey of residential home assessors show that the majority of respondents believe that proximity to a solar installation has either no impact or a positive impact on home values."

This analysis supports the conclusion of this report that the data supports no impact on adjoining property values.

B. University of Rhode Island, September 2020

Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island

The University of Rhode Island published a study entitled **Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island** on September 29, 2020 with lead researchers being Vasundhara Gaur and Corey Lang. I have read that study and interviewed Mr. Corey Lang related to that study. This study is often cited by opponents of solar farms but the findings of that study have some very specific caveats according to the report itself as well as Mr. Lang from the interview.

While that study does state in the Abstract that they found depreciation of homes within 1-mile of a solar farm, that impact is limited to non-rural locations. On Pages 16-18 of that study under Section 5.3 Heterogeneity in treatment effect they indicate that the impact that they found was limited to non-rural locations with the impact in rural locations effectively being zero. For the study they defined "rural" as a municipality/township with less than 850 population per square mile.

They further tested the robustness of that finding and even in areas up to 2,000 population per square mile they found no statistically significant data to suggest a negative impact. They have not specifically defined a point at which they found negative impacts to begin, as the sensitivity study stopped checking at the 2,000-population dataset.

Where they did find negative impacts was in high population density areas that was largely a factor of running the study in Massachusetts and Rhode Island which the study specifically cites as being the 2nd and 3rd most population dense states in the USA. Mr. Lang in conversation as well as in recorded presentations has indicated that the impact in these heavily populated areas may reflect a loss in value due to the scarce greenery in those areas and not specifically related to the solar farm itself. In other words, any development of that site might have a similar impact on property value.

Based on this study I have checked the population for the District 4 of Orange County, which has a population of 11,141 population for 2020 based on SiteToDoBusiness by ESRI and a total area of 118.7 square miles. This indicates a population density of 94 people per square mile which puts this well below the threshold indicated by the Rhode Island Study. I also checked the censusreporter.org website which indicated a population of 10,889 people in 2019 with a population density of 91.7 people per square mile.

I therefore conclude that the Rhode Island Study supports the indication of no impact on adjoining properties for the proposed solar farm project.

C. *Master's Thesis: ECU by Zachary Dickerson July 2018*

A Solar Farm in *My* Backyard? Resident Perspectives of Utility-Scale Solar in Eastern North Carolina

This study was completed as part of a Master of Science in Geography Master's Thesis by Zachary Dickerson in July 2018. This study sets out to address three questions:

1. Are there different aspects that affect resident satisfaction regarding solar farms?

2. Are there variations in satisfaction for residents among different geographic settings, e.g. neighborhoods adjacent to the solar farms or distances from the solar farms?

3. How can insight from both the utility and planning sectors, combined with knowledge gained from residents, fill gaps in communication and policy writing in regard to solar farms?

This was done through survey and interview with adjacent and nearby neighbors of existing solar farms. The positive to neutral comments regarding the solar farms were significantly higher than negative. The researcher specifically indicates on Page 46 "The results show that respondents generally do not believe the solar farms pose a threat to their property values."

The most negative comments regarding the solar farms were about the lack of information about the approval process and the solar farm project prior to construction.

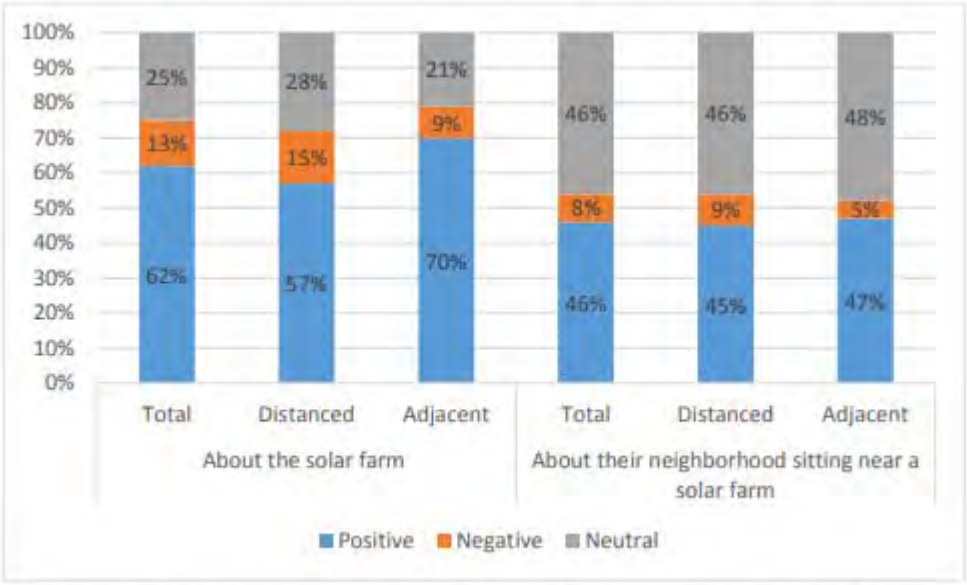


Figure 11: Residents' positive/negative word choices by geographic setting for both questions

D. Ernest Orlando Lawrence Berkeley National Laboratory, December, 2019

The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis

This study addresses wind farms and not solar farms but it is a reasonable consideration. The activity on a wind farm is significantly different in terms of the mechanics and more particularly on the appearance or viewshed as wind farms cannot be screened from adjoining property owners. This study was commissioned by the Department of Energy and not by any developer. This study examined 7,500 home sales between 1996 and 2007 in order to track sales prices both before and after a wind energy facility was announced or built. This study specifically looked into possible stigma, nuisance, and scenic vista.

On page 17 of that study they conclude "Although the analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact."

Given that solar farms are a similar use, but with a lower profile and therefore a lower viewshed than the wind farms, it is reasonable to translate these findings of no impact to solar farms.

V. Summary of Solar Projects In Virginia

I have researched the solar projects in Virginia. I identified the solar farms through the Solar Energy Industries Association (SEIA) Major Projects List and then excluded the roof mounted facilities. I focused on larger solar farms over 10 MW though I have included a couple of smaller solar farms as shown in the chart below

I was able to identify and research 50 solar farms in Virginia as shown below. These are primarily over 20 MW in size with adjoining homes as close as 100 feet and the mix of adjoining uses is primarily agricultural and residential.

Parcel #	Name	County	City	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre Res	Agri	Agri/Res	Com
115	Buckingham I	Buckingham	Cumberland	19.8	481.18		N/A	N/A	8%	73%	18%	0%
121	Scott	Powhatan	Amelia Court Hou	20	898.4		1,421	730	29%	28%	44%	0%
204	Walker-Correctional	New Kent	Barhamsville	20	484.65	484.65	516	103	13%	68%	20%	0%
205	Sappony	Sussex	Stony Creek	20	322.68	322.68			2%	98%	0%	0%
216	Beetle	Southampton	Boykins	40	422.19	422.19	1,169	310	0%	10%	90%	0%
222	Grasshopper	Mecklenburg	Chase City	80	946.25	946.25			6%	87%	5%	1%
226	Belcher	Louisa	Louisa	88	1238.11	1238.11		150	19%	53%	28%	0%
228	Bluestone Farm	Mecklenburg	Chase City	4.99	332.5	332.5			0%	100%	0%	0%
257	Nokesville	Prince Willia	Nokesville		331.01	331.01			12%	49%	17%	23%
261	Buckingham II	Buckingham	Buckingham	19.8	460.05	460.05			6%	79%	15%	0%
262	Mount Jackson	Shenandoah	Mount Jackson	15.65	652.47	652.47			21%	51%	14%	13%
263	Gloucester	Gloucester	Gloucester	20	203.55	203.55	508	190	17%	55%	28%	0%
267	Scott II	Powhatan	Powhatan		701	701			41%	25%	34%	0%
272	Churchview	Middlesex	Church View	20	567.91	567.91			9%	64%	27%	0%
303	Turner	Henrico	Henrico	20	463.12	463.12	N/A	N/A	21%	37%	0%	42%
311	Sunnybrook Farm	Halifax	Scottsburg		527.88	527.88	N/A	N/A	15%	59%	26%	0%
312	Powell Creek	Halifax	Alton		513	513	N/A	N/A	7%	71%	22%	0%
339	Crystal Hill	Halifax	Crystal Hill		628.67	628.67	1,570	140	6%	41%	35%	18%
354	Amazon East	Accomack	Oak Hall	80	1000	1000	645	135	8%	75%	17%	0%
355	Alton Post	Halifax	Alton		501.96	501.96	749	100	2%	58%	40%	0%
364	Remington	Fauquier	Remington	20	277.2	277.2	2,755	1,280	10%	41%	31%	18%
365	Greenwood	Culpepper	Stevensburg	100	2266.58	2266.58	788	200	8%	62%	29%	0%
367	Culpeper Sr	Culpeper	Culpeper		12.53	12.53	N/A	N/A	15%	0%	86%	0%
370	Cherrydale	Northampton	Kendall Grove	20	180.17	180.17	N/A	N/A	5%	0%	92%	3%
373	Woodland,VA	Isle of Wight	Smithfield	19.7	211.12	211.12	606	190	9%	0%	91%	0%
374	Whitehouse	Louisa	Louisa	20	499.52	499.52	1,195	110	24%	55%	18%	4%
402	Cedar Park	Henrico	Richmond		13.93	13.93			57%	0%	0%	43%
407	Foxhound	Halifax	Clover	91	1311.78	1311.78	885	185	5%	61%	17%	18%
415	Stagecoach II	Halifax	Nathalie	16.625	327.87	327.87	1,073	255	5%	66%	29%	0%
484	Essex Solar Center	Essex	Center Cross	20	106.12	106.12	693	360	3%	70%	27%	0%
485	Southampton	Southampton	Newsoms	100	3243.92	3243.92	-	-	3%	78%	17%	3%
487	Augusta	Augusta	Stuarts Draft	125	3197.4	1147	588	165	16%	61%	16%	7%
490	Cartersville	Powhatan	Powhatan		2945	1358	1,467	105	6%	14%	80%	0%
495	Walnut	King and Que	Shacklefords	110	1700	1173	641	165	14%	72%	13%	1%
497	Piney Creek	Halifax	Clover	80	776.18	422	523	195	15%	62%	24%	0%
511	UVA Puller	Middlesex	Topping	15	120	120	1,095	185	59%	32%	0%	10%
519	Fountain Creek	Greensville	Emporia	80	798.3	798.3	-	-	6%	23%	71%	0%
557	Winterpock 1	Chesterfield	Chesterfield		518	308	2,106	350	4%	78%	18%	0%
577	Windsor	Isle of Wight	Windsor	85	564.1	564.1	572	160	9%	67%	24%	0%
579	Spotsylvania	Spotsylvania	Paytes	500	6412	3500			9%	52%	11%	27%
586	Sweet Sue	King William	Aylett	77	1262	576	1,617	680	7%	68%	25%	0%
591	Warwick	Prince Georg	Disputanta	26.5	967.62	442.05	555	115	12%	68%	20%	0%
621	Loblolly	Surry	Spring Grove	150	2181.92	1000	1,860	110	7%	62%	31%	0%
622	Woodridge	Albemarle	Scottsville	138	2260.87	1000	1,094	170	9%	63%	28%	0%
633	Brunswick	Greensville	Emporia	150.2	2076.36	1387.3	1,091	240	4%	85%	11%	0%
642	Belcher 3	Louisa	Louisa		749.36	658.56	598	180	14%	71%	14%	1%
649	Endless Caverns	Rockingham	New Market	31.5	355	323.6	624	190	15%	27%	51%	7%
664	Watlington	Halifax	South Boston	20	240.09	137	536	215	24%	48%	28%	0%
671	Spout Spring	Appomattox	Appomattox	60	881.12	673.37	836	335	16%	30%	46%	8%
703	Lily Pond	Dinwiddie	Carson	80	2197.74	1930	723	115	13%	60%	27%	0%
		Total Number of Solar Farms		50								
			Average	66.76	1006.61	755.54	1003.2	253.5	13%	53%	29%	5%
			Median	31.50	566.01	520.44	788.0	185.0	9%	60%	24%	0%
			High	500.00	6412.00	3500.00	2755.0	1280.0	59%	100%	92%	43%
			Low	4.99	12.53	12.53	508.0	100.0	0%	0%	0%	0%

On the following pages I have included summary data on the constructed solar farms indicated above. Similar information is available for the larger set of solar farms in the adjoining states in my files if requested.

115: Buckingham Solar, E. James Anderson Hwy, Buckingham, VA

This project was proposed in 2017 and located on 460 acres with the closest home proposed to be 150 feet from the closest solar panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	5.95%	71.79%
Agricultural	78.81%	20.51%
Agri/Res	15.24%	7.69%
Total	**100.00%**	**100.00%**

121: Scott Solar Project, 1580 Goodes Bridge Rd, Powhatan, VA

This project was built in 2016 and located on 165 acres out of 898 acres for a 17 MW with the closest home proposed to be 730 feet from the closest solar panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	28.83%	78.57%
Agri/Res	43.52%	3.57%
Agricultural	27.65%	17.86%
Total	**100.00%**	**100.00%**

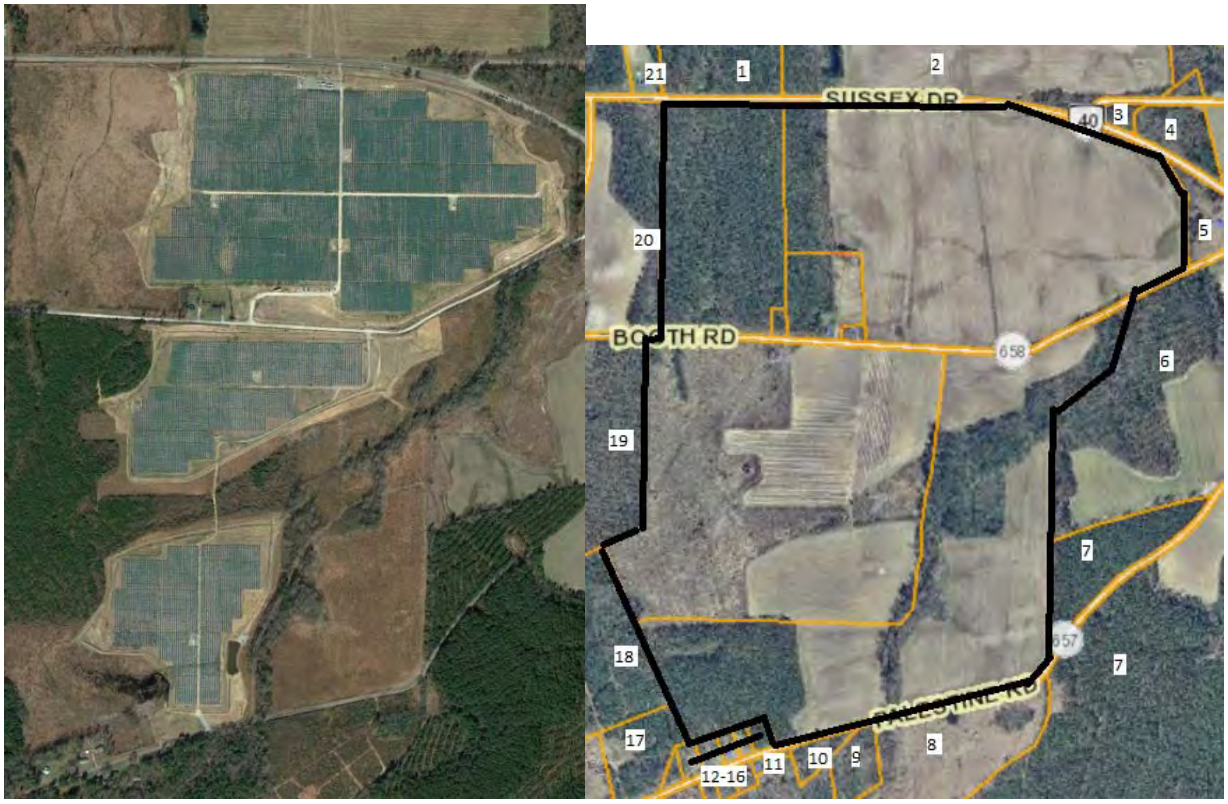
204: Walker-Correctional Solar, Barham Road, Barhamsville, VA

This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	12.59%	76.92%
Agricultural	67.71%	15.38%
Agri/Res	19.70%	7.69%
Total	**100.00%**	**100.00%**

205: Sappony Solar, Sussex Drive, Stony Creek, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	12.59%	76.92%
Agricultural	67.71%	15.38%
Agri/Res	19.70%	7.69%
Total	**100.00%**	**100.00%**

354: Amazon Solar project East (Eastern Shore), Accomack, VA

This project was built in 2016 for a solar project on a 1,000-acre assemblage for an 80 MW facility. The closest home is 135 feet from the closest panel.

Adjoining Use Breakdown

	Acreage	**Parcels**
Residential	8.18%	63.74%
Agricultural	75.16%	30.77%
Agri/Res	16.56%	3.30%
Substation	0.08%	1.10%
Church	0.01%	1.10%
Total	**100.00%**	**100.00%**

364: Remington Solar, 12080 Lucky Hill Rd, Remington, VA

This project was built in 2017 for a solar project on a 125-acre tract for a 20 MW facility. There were some recent home sales adjoining this project, but it was difficult to do any matched pairs. One sale was an older home in very poor condition according to the broker and required crossing railroad tracks on a private road to get access to the home and located across from a large industrial building. The other sale is a renovated historic home on a large tract of land just one parcel north of the large industrial building. These sales essentially have too much static around them to isolate any impacts separate from these other factors.

Adjoining Use Breakdown

	Acreage	**Parcels**
Residential	10.24%	65.38%
Agricultural	40.79%	19.23%
Agri/Res	30.87%	7.69%
Warehouse	0.82%	3.85%
Substation	17.28%	3.85%
Total	**100.00%**	**100.00%**

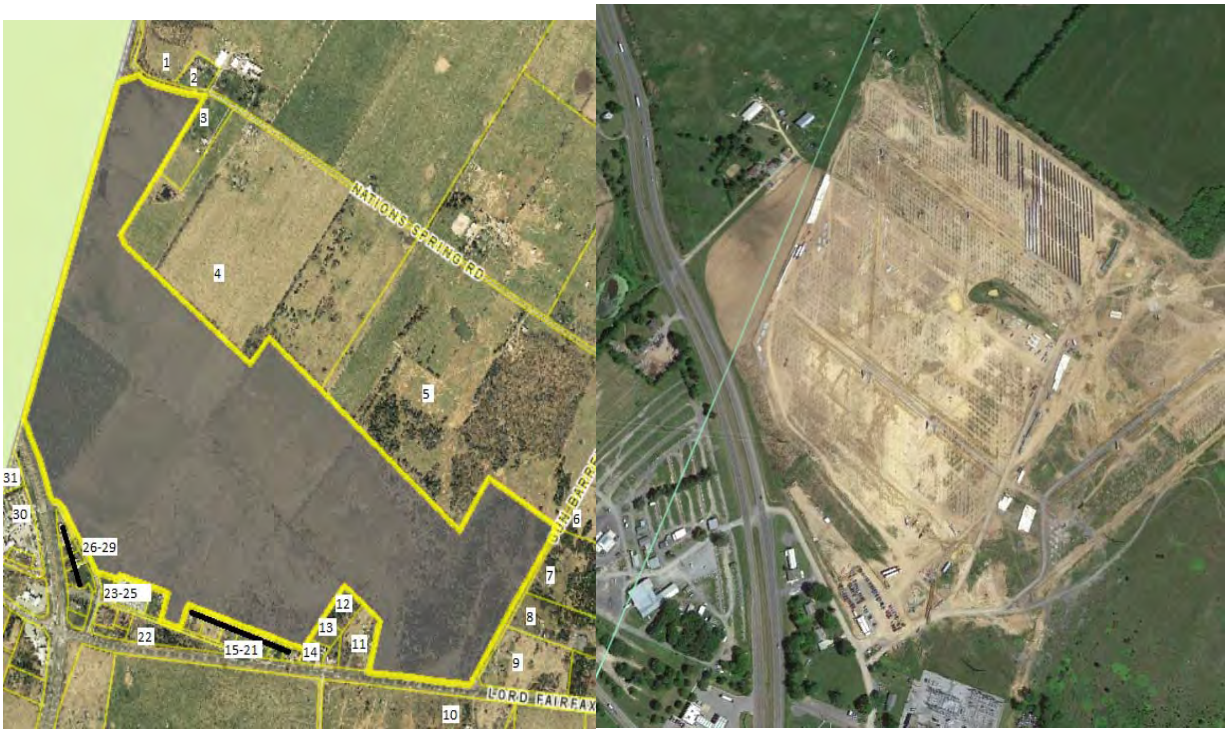
370: Cherrydale Solar, Seaside Road, Kendall Grove, VA

This project was built in 2017 and located on 180.17 acres for a 20 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	5.44%	80.77%
Agricultural	92.01%	15.38%
Warehouse	2.55%	3.85%
Total	**100.00%**	**100.00%**

371: Clarke County Solar, Double Tollgate Road, White Post, VA

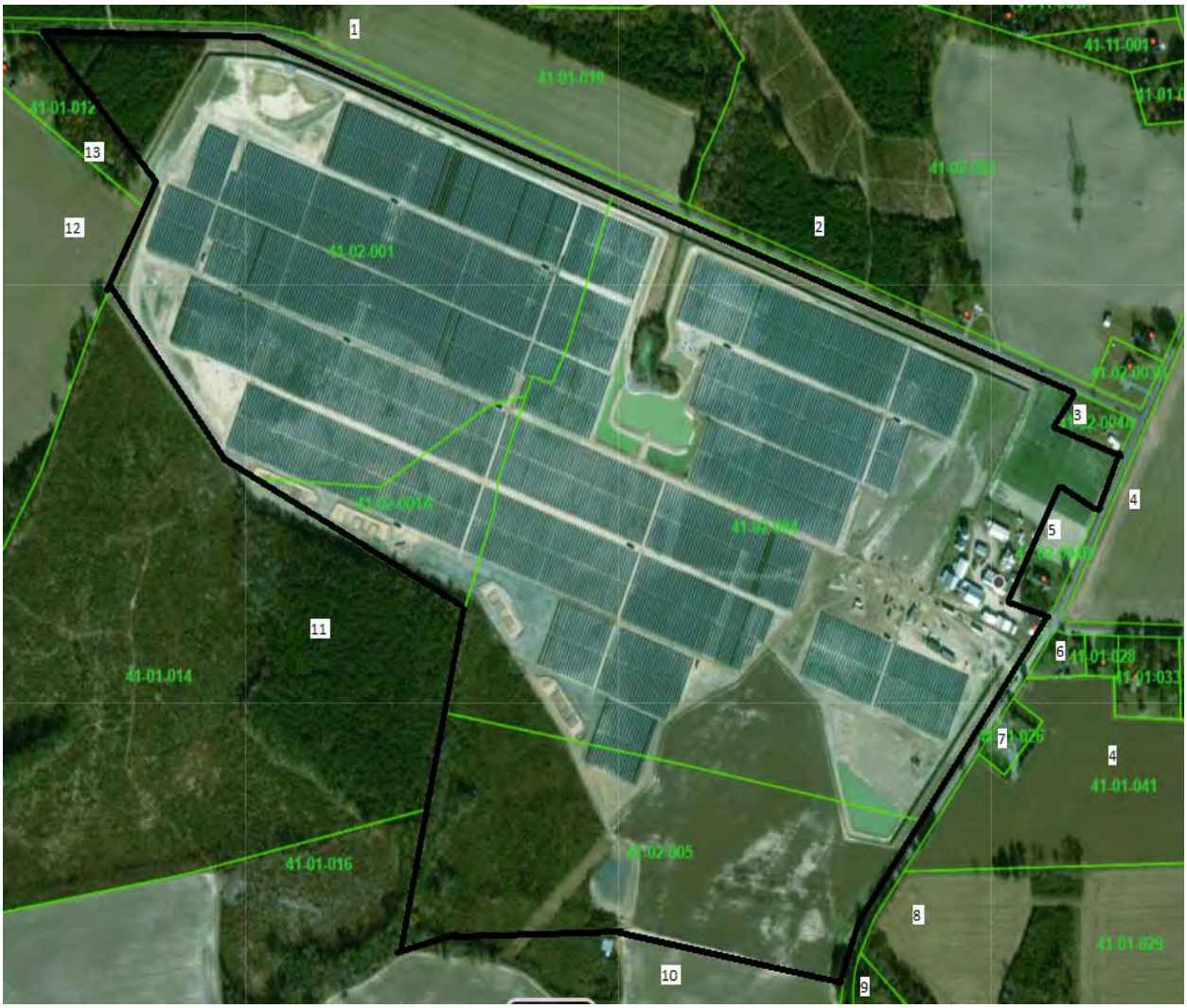


This project was built in 2017 and located on a portion of a 234.84-acre tract for a 20 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	13.70%	74.19%
Agricultural	38.89%	6.45%
Agri/Res	46.07%	6.45%
Commercial	0.19%	6.45%
Warehouse	0.85%	3.23%
Substation	0.30%	3.23%
Total	**100.00%**	**100.00%**

373: Woodland Solar, Longview Drive, Smithfield, VA



This project was built in 2016 for a solar project on a 211.12-acre tract for a 19.7 MW facility. The closest single-family home is 190 feet away from the closest solar panel. The average distance is 606 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	8.85%	46.15%
Agricultural	91.08%	46.15%
Cell Tower	0.07%	7.69%
Total	**100.00%**	**100.00%**

374: Whitehouse Solar, Chalklevel Road, Louisa, VA

This project was built in 2016 for a solar project on a 499.52-acre tract for a 20 MW facility. The closest single-family home is 110 feet away from the closest solar panel. The average distance is 1,195 feet.

Adjoining Use Breakdown

	Acreage	**Parcels**
Residential	23.55%	70.27%
Agricultural	54.51%	10.81%
Agri/Res	18.22%	2.70%
Commercial	2.49%	13.51%
Industrial	1.22%	2.70%
Total	**100.00%**	**100.00%**

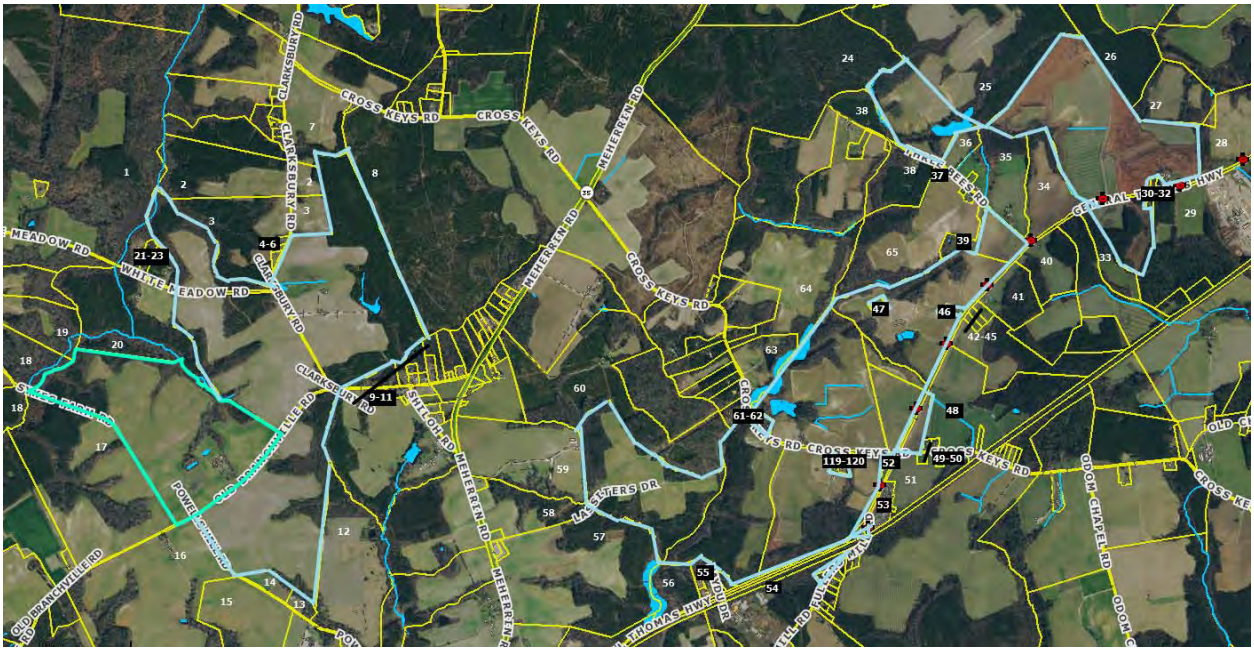
484: Essex Solar, Tidewater Trail, Center Cross, VA

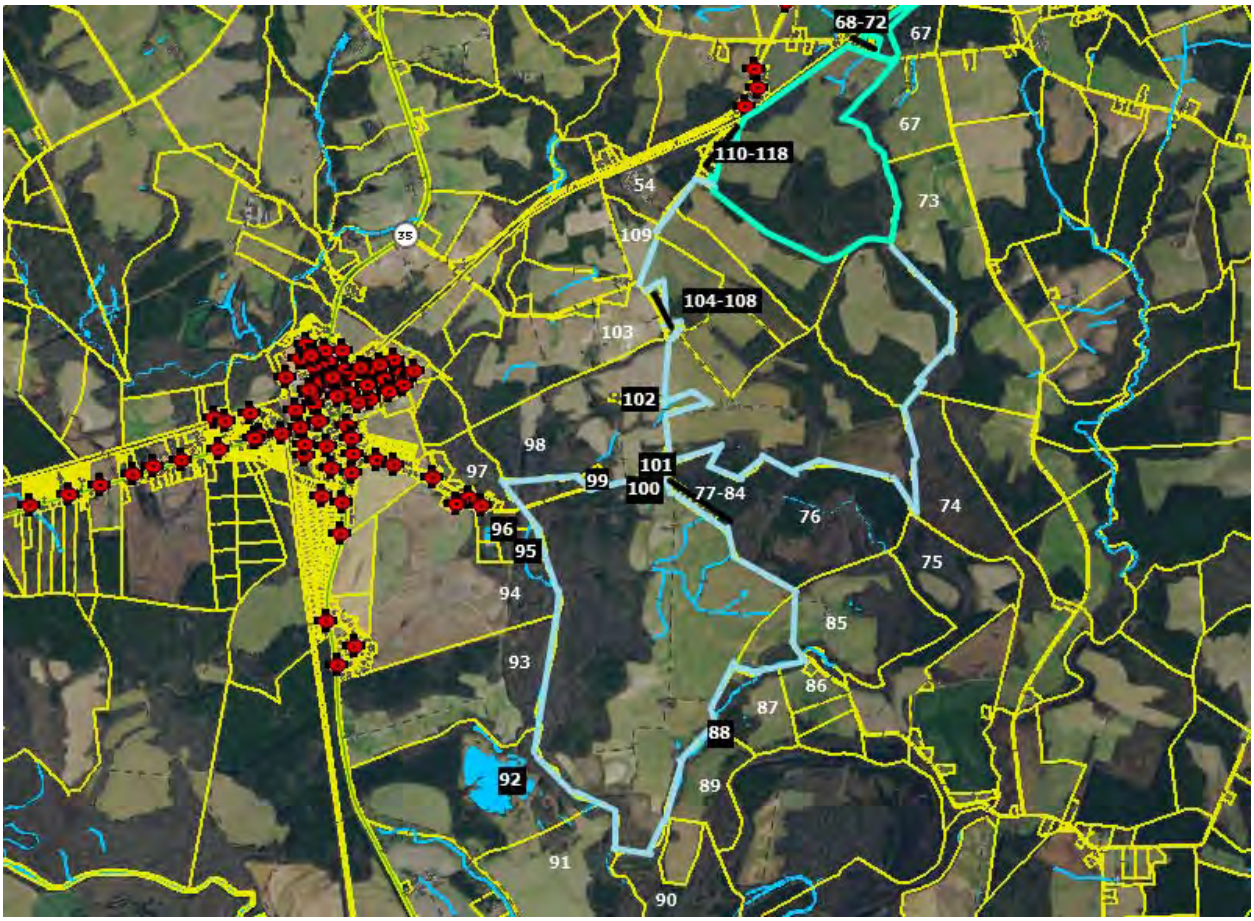
This project was built in 2017 for a solar project on a 106.12-acre tract for a 20 MW facility. The closest single-family home is 360 feet away from the closest solar panel. The average distance is 693 feet.

Adjoining Use Breakdown

	Acreage	**Parcels**
Residential	3.13%	57.89%
Agricultural	69.65%	26.32%
Agri/Res	26.99%	10.53%
Religious	0.23%	5.26%
Total	**100.00%**	**100.00%**

485: Southampton Solar, General Thomas Hwy, Newsoms, VA





This project was built in 2017 for a solar project on an assemblage of 3,244 acres for a 100 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	2.56%	53.33%
Agricultural	77.99%	36.67%
Agri/Res	16.56%	8.33%
Industrial	2.89%	1.67%
Total	**100.00%**	**100.00%**

VI. Market Analysis of the Impact on Value from Solar Farms

I have researched hundreds of solar farms in numerous states to determine the impact of these facilities on the value of adjoining property. This research has primarily been in North Carolina, but I have also conducted market impact analyses in Virginia, South Carolina, Tennessee, Texas, Oregon, Mississippi, Maryland, New York, California, Missouri, Florida, Montana, Georgia, Louisiana, and New Jersey.

Wherever I have looked at solar farms, I have derived a breakdown of the adjoining uses to show what adjoining uses are typical for solar farms and what uses would likely be considered consistent with a solar farm use similar to the breakdown that I've shown for the subject property on the previous page. A summary showing the results of compiling that data over hundreds of solar farms is shown later in the Scope of Research section of this report.

I also consider whether the properties adjoining a solar farm in one location have characteristics similar to the properties abutting or adjoining the proposed site so that I can make an assessment of market impact on each proposed site. Notably, in most cases solar farms are placed in areas very similar to the site in question, which is surrounded by low density residential and agricultural uses. In my over 700 studies, I have found a striking repetition of that same typical adjoining use mix in over 90% of the solar farms I have looked at. Matched pair results in multiple states are strikingly similar, and all indicate that solar farms – which generate very little traffic, and do not generate noise, dust or have other harmful effects – do not negatively impact the value of adjoining or abutting properties.

On the following pages I have considered matched pair data specific to Virginia and Kentucky.

In the next section I have considered matched pair data throughout the Southeast of the United States as being the most similar states that would most readily compare to Virginia. This includes data from Florida, Georgia, South Carolina, North Carolina, Tennessee, Virginia and Maryland. I focused on projects of 5 MW and larger though I have significant supplemental data on solar farms just smaller than that in North Carolina that show similar results. This data is available in my files.

I have additional supporting information from other states in my files that show a consistent pattern across the United States, but again, I have focused on the Southeast in this analysis.

A. Virginia Data

I have identified matched pairs adjoining 3 of the 27 solar farms noted above. I have also included data from a solar farm in Kentucky that does a good job of illustrating distant views of solar panels in relation to adjoining housing.

The following pages detail the matched pairs and how they were derived.

1. Matched Pair – Clarke County Solar, Clarke County, VA

This project is a 20 MW facility located on a 234-acre tract that was built in 2017.

I have considered two recent sales of Parcel 3. The home on this parcel is 1,230 feet from the closest panel as measured in the second map from Google Earth, which shows the solar farm under construction. This home sold in January 2017 for $295,000 and again in August 2019 for $385,000. I show each sale below and compare those to similar home sales in each time frame. The significant increase in price between 2017 and 2019 is due to a major kitchen remodel, new roof, and related upgrades as well as improvement in the market in general. The sale and later resale of the home with updates and improvements speaks to pride of ownership and increasing overall value as properties perceived as diminished are less likely to be renovated and sold for profit.

I note that 102 Tilthammer includes a number of barns that I did not attribute any value in the analysis. The market would typically give some value for those barns but even without that adjustment there is an indication of a positive impact on value due to the solar farm. The landscaping buffer from this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	8/18/2019	$385,000	1979	1,392	$276.58	3/2	Det Gar	Ranch	UnBsmt
	Not	167 Leslie	5.00	8/19/2020	$429,000	1980	1,665	$257.66	3/2	Det2Gar	Ranch	
	Not	2393 Old Chapel	2.47	8/10/2020	$330,000	1974	1,500	$220.00	3/1.5	Det Gar	Ranch	
	Not	102 Tilthammer	6.70	5/7/2019	$372,000	1970	1,548	$240.31	3/1.5	Det Gar	Ranch	UnBsmt

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							$385,000			1230
-$13,268		-$2,145	-$56,272		-$5,000	$50,000	$402,315	-4%		
-$9,956	$25,000	$8,250	-$19,008	$5,000		$50,000	$389,286	-1%		
$3,229		$16,740	-$29,991	$5,000			$366,978	5%		
									0%	

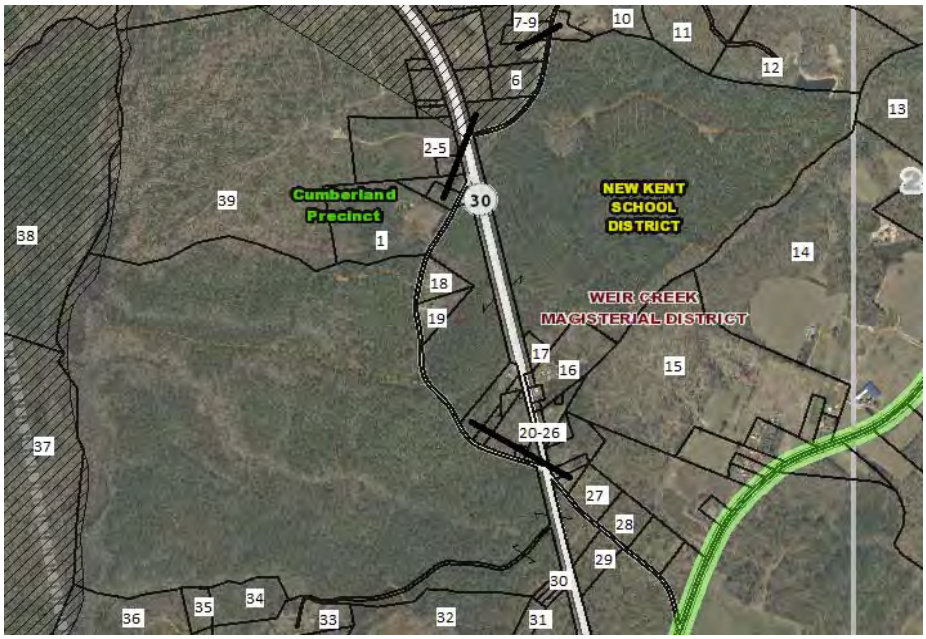
Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	1/9/2017	$295,000	1979	1,392	$211.93	3/2	Det Gar	Ranch	UnBsmt
	Not	6801 Middle	2.00	12/12/2017	$249,999	1981	1,584	$157.83	3/2	Open	Ranch	
	Not	4174 Rockland	5.06	1/2/2017	$300,000	1990	1,688	$177.73	3/2	2 Gar	2-story	
	Not	400 Sugar Hill	1.00	6/7/2018	$180,000	1975	1,008	$178.57	3/1	Open	Ranch	

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							$295,000			1230
-$7,100	$25,000	-$2,500	-$24,242		$5,000	$50,000	$296,157	0%		
$177		-$16,500	-$42,085		-$10,000	$50,000	$281,592	5%		
-$7,797		$3,600	$54,857	$10,000	$5,000	$50,000	$295,661	0%		
									1%	

2. Matched Pair – Walker-Correctional Solar, Barham Road, Barhamsville, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

I considered the recent sale identified on the map above as Parcel 19, which is directly across the street and based on the map shown on the following page is 250 feet from the closest panel. A

limited buffering remains along the road with natural growth being encouraged, but currently the panels are visible from the road. Alex Uminski, SRA with MGMiller Valuations in Richmond VA confirmed this sale with the buying and selling broker. The selling broker indicated that the solar farm was not a negative influence on this sale and in fact the buyer noticed the solar farm and then discovered the listing. The privacy being afforded by the solar farm was considered a benefit by the buyer. I used a matched pair analysis with a similar sale nearby as shown below and found no negative impact on the sales price. Property actually closed for more than the asking price. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

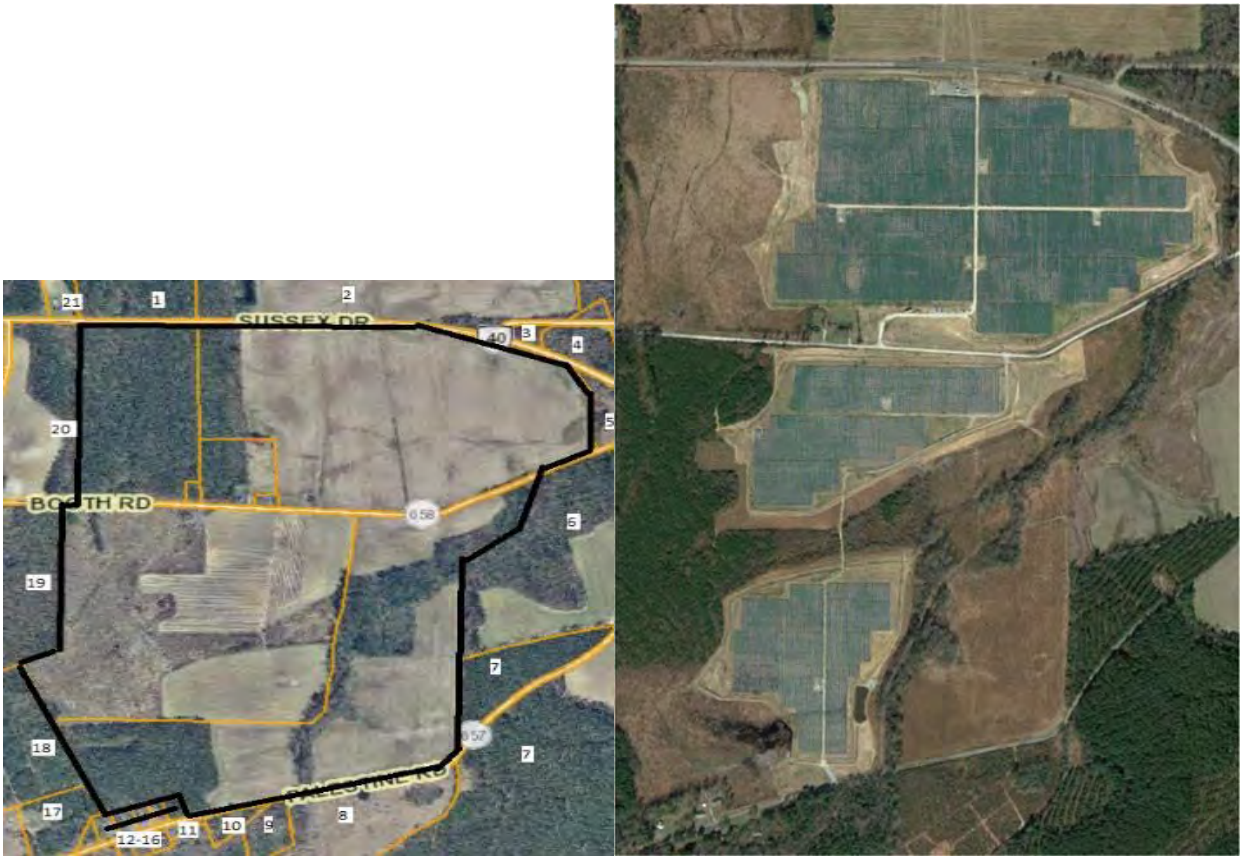
Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	5241 Barham	2.65	10/18/2018	$264,000	2007	1,660	$159.04	3/2	Drive	Ranch	Modular
Not	17950 New Kent	5.00	9/5/2018	$290,000	1987	1,756	$165.15	3/2.5	3 Gar	Ranch	
Not	9252 Ordinary	4.00	6/13/2019	$277,000	2001	1,610	$172.05	3/2	1.5-Gar	Ranch	
Not	2416 W Miller	1.04	9/24/2018	$299,000	1999	1,864	$160.41	3/2.5	Gar	Ranch	

Adjoining Sales Adjusted

Solar	Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
Adjoins	5241 Barham								$264,000		250
Not	17950 New Kent		-$8,000	$29,000	-$4,756	-$5,000	-$20,000	-$15,000	$266,244	-1%	
Not	9252 Ordinary	-$8,310	-$8,000	$8,310	$2,581		-$10,000	-$15,000	$246,581	7%	
Not	2416 W Miller		$8,000	$11,960	-$9,817	-$5,000	-$10,000	-$15,000	$279,143	-6%	
								Average Diff		0%	

I also spoke with Patrick W. McCrerey of Virginia Estates who was marketing a property that sold at 5300 Barham Road adjoining the Walker-Correctional Solar Farm. He indicated that this property was unique with a home built in 1882 and heavily renovated and updated on 16.02 acres. The solar farm was through the woods and couldn't be seen by this property and it had no impact on marketing this property. This home sold on April 26, 2017 for $358,000. I did not set up any matched pairs for this property since it is a unique property that any such comparison would be difficult to rely on. The broker's comments do support the assertion that the adjoining solar farm had no impact on value. The home in this case was 510 feet from the closest panel.

3. Matched Pair – Sappony Solar, Sussex County, VA



This project is a 30 MW facility located on a 322.68-acre tract that was built in the fourth quarter of 2017.

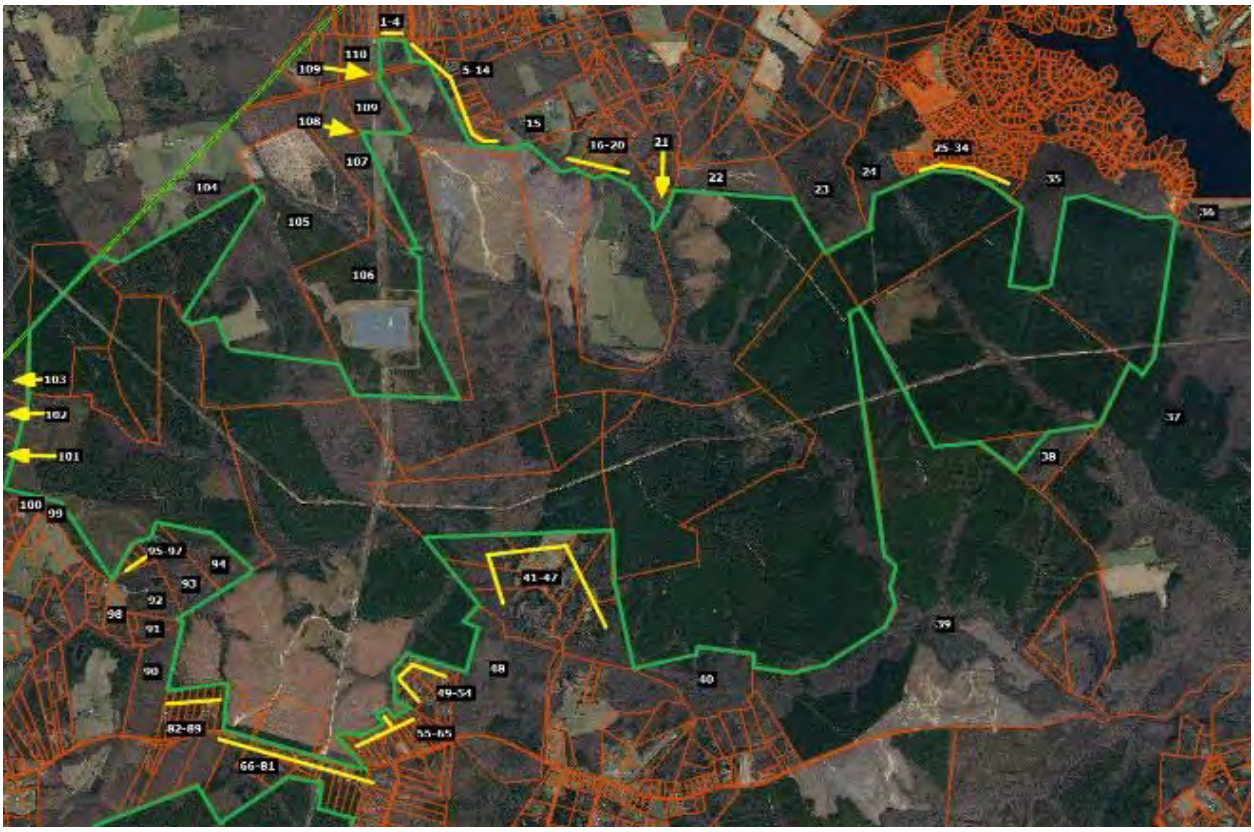
I have considered the 2018 sale of Parcel 17 as shown below. This was a 1,900 s.f. manufactured home on a 6.00-acre lot that sold in 2018. I have compared that to three other nearby manufactured homes as shown below. The range of impacts is within typical market variation with an average of -1%, which supports a conclusion of no impact on property value. The landscaping buffer is considered medium.

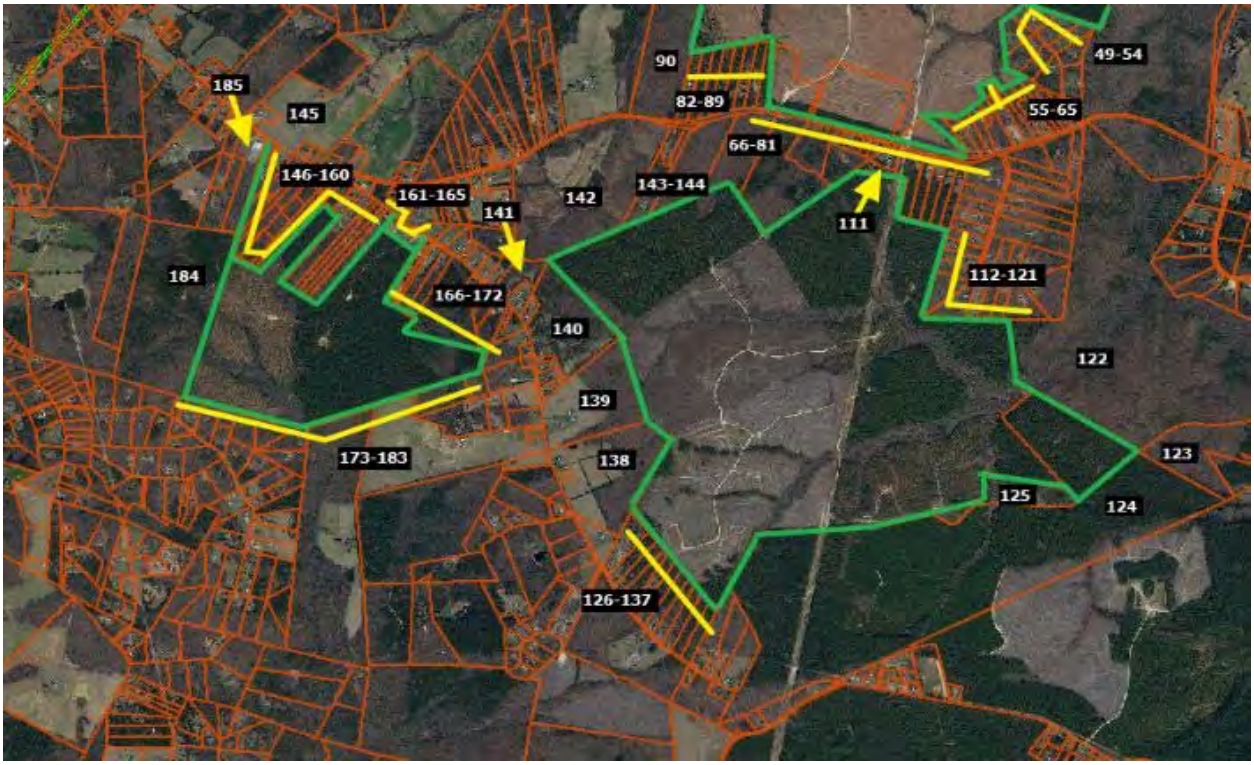
Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
	Adjoins	12511 Palestine	6.00	7/31/2018	$128,400	2013	1,900	$67.58	4/2.5	Open	Manuf	
	Not	15698 Concord	3.92	7/31/2018	$150,000	2010	2,310	$64.94	4/2	Open	Manuf	Fence
	Not	23209 Sussex	1.03	7/7/2020	$95,000	2005	1,675	$56.72	3/2	Det Crpt	Manuf	
	Not	6494 Rocky Br	4.07	11/8/2018	$100,000	2004	1,405	$71.17	3/2	Open	Manuf	

Adjoining Sales Adjusted									Avg	
Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
							$128,400			1425
$0		$2,250	-$21,299	$5,000			$135,951	-6%		
-$5,660	$13,000	$3,800	$10,209	$5,000	$1,500		$122,849	4%		
-$843		$4,500	$28,185				$131,842	-3%		
									-1%	

4. Matched Pair – Spotsylvania Solar, Paytes, VA





This solar farm is being built in four phases with the area known as Site C having completed construction in November 2020 after the entire project was approved in April 2019. Site C, also known as Pleinmont 1 Solar, includes 99.6 MW located in the southeast corner of the project and shown on the maps above with adjoining parcels 111 through 144. The entire Spotsylvania project totals 617 MW on 3500 acres out of a parent tract assemblage of 6,412 acres.

I have identified three adjoining home sales that occurred during construction and development of the site in 2020.

The first is located on the north side of Site A on Orange Plank Road. The second is located on Nottoway Lane just north of Caparthin Road on the south side of Site A and east of Site C. The third is located on Post Oak Road for a home that backs up to Site C that sold in September 2020 near the completion of construction for Site C.

Spotsylvania Solar Farm

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	12901 Orng Plnk	5.20	8/27/2020	$319,900	1984	1,714	$186.64	3/2	Drive	1.5	Un Bsmt
Not	8353 Gold Dale	3.00	1/27/2021	$415,000	2004	2,064	$201.07	3/2	3 Gar	Ranch	
Not	6488 Southfork	7.26	9/9/2020	$375,000	2017	1,680	$223.21	3/2	2 Gar	1.5	Barn/Patio
Not	12717 Flintlock	0.47	12/2/2020	$290,000	1990	1,592	$182.16	3/2.5	Det Gar	Ranch	

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
12901 Orng Plnk								$319,900		1270
8353 Gold Dale	-$5,219	$20,000	-$41,500	-$56,298		-$20,000		$311,983	2%	
6488 Southfork	-$401	-$20,000	-$61,875	$6,071		-$15,000		$283,796	11%	
12717 Flintlock	-$2,312	$40,000	-$8,700	$17,779	-$5,000	-$5,000		$326,767	-2%	
							Average Diff		4%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	9641 Nottoway	11.00	5/12/2020	$449,900	2004	3,186	$141.21	4/2.5	Garage	2-Story	Un Bsmt
Not	26123 Lafayette	1.00	8/3/2020	$390,000	2006	3,142	$124.12	3/3.5	Gar/DtG	2-Story	
Not	11626 Forest	5.00	8/10/2020	$489,900	2017	3,350	$146.24	4/3.5	2 Gar	2-Story	
Not	10304 Pny Brnch	6.00	7/27/2020	$485,000	1998	3,076	$157.67	4/4	2Gar/Dt2	Ranch	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
9641 Nottoway								$449,900		1950
26123 Lafayette	-$2,661	$45,000	-$3,900	$4,369	-$10,000	-$5,000		$417,809	7%	
11626 Forest	-$3,624		-$31,844	-$19,187		-$5,000		$430,246	4%	
10304 Pny Brnch	-$3,030		$14,550	$13,875	-$15,000	-$15,000	-$10,000	$470,396	-5%	
							Average Diff		2%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	13353 Post Oak	5.20	9/21/2020	$300,000	1992	2,400	$125.00	4/3	Drive	2-Story	Fn Bsmt
Not	9609 Logan Hgt	5.86	7/4/2019	$330,000	2004	2,352	$140.31	3/2	2Gar	2-Story	
Not	12810 Catharpian	6.18	1/30/2020	$280,000	2008	2,240	$125.00	4/2.5	Drive	2-Story	Bsmt/Nd Pnt
Not	10725 Rbrt Lee	5.01	10/26/2020	$295,000	1995	2,166	$136.20	4/3	Gar	2-Story	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
13353 Post Oak								$300,000		1171
9609 Logan Hgt	$12,070		-$19,800	$5,388		-$15,000	$15,000	$327,658	-9%	
12810 Catharpian	$5,408		-$22,400	$16,000	$5,000		$15,000	$299,008	0%	
10725 Rbrt Lee	-$849		-$4,425	$25,496		-$10,000		$305,222	-2%	
							Average Diff		-4%	

All three of these homes are well set back from the solar panels at distances over 1,000 feet and are well screened from the project. All three show no indication of any impact on property value.

5. Matched Pair – Crittenden Solar, Crittenden, KY

This solar farm was built in December 2017 on a 181.70-acre tract but utilizing only 34.10 acres. This is a 2.7 MW facility with residential subdivisions to the north and south.

I have identified five home sales to the north of this solar farm on Clairborne Drive and one home sale to the south on Eagle Ridge Drive since the completion of this solar farm. The home sale on Eagle Drive is for a $75,000 home and all of the homes along that street are similar in size and price range. According to local broker Steve Glacken with Cutler Real Estate these are the lowest price range/style home in the market. I have not analyzed that sale as it would unlikely provide significant data to other homes in the area.

Mr. Glacken is currently selling lots at the west end of Clairborne for new home construction. He indicated that the solar farm near the entrance of the development has been a complete non-factor and none of the home sales are showing any concern over the solar farm. Most of the homes are in the $250,000 to $280,000 price range. The vacant residential lots are being marketed for $28,000 to $29,000. The landscaping buffer is considered light, but the rolling terrain allows for distant views of the panels from the adjoining homes along Clairborne Drive.

The first home considered is a bit of an anomaly for this subdivision in that it is the only manufactured home that was allowed in the community. It sold on January 3, 2019. I compared that sale to three other manufactured home sales in the area making minor adjustments as shown on the next page to account for the differences. After all other factors are considered, the adjustments show a -1% to +13% impact due to the adjacency of the solar farm. The best indicator is 1250 Cason, which shows a 3% impact. A 3% impact is within the normal static of real estate transactions and therefore not considered indicative of a positive impact on the property, but it strongly supports an indication of no negative impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
	Adjoins	250 Claiborne	0.96	1/3/2019	$120,000	2000	2,016	$59.52	3/2	Drive	Manuf	
	Not	1250 Cason	1.40	4/18/2018	$95,000	1994	1,500	$63.33	3/2	2-Det	Manuf	Carport
	Not	410 Reeves	1.02	11/27/2018	$80,000	2000	1,456	$54.95	3/2	Drive	Manuf	
	Not	315 N Fork	1.09	5/4/2019	$107,000	1992	1,792	$59.71	3/2	Drive	Manuf	

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	250 Claiborne								$120,000			373
Not	1250 Cason	$2,081		$2,850	$26,144		-$5,000	-$5,000	$116,075	3%		
Not	410 Reeves	$249		$0	$24,615				$104,865	13%		
Not	315 N Fork	-$1,091		$4,280	$10,700				$120,889	-1%		
											5%	

I also looked at three other home sales on this street as shown below. These are stick-built homes and show a higher price range.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
	Adjoins	300 Claiborne	1.08	9/20/2018	$212,720	2003	1,568	$135.66	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	$229,000	2007	1,446	$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	$265,000	2005	1,735	$152.74	3/3	2-Car	Ranch	Brick
	Not	215 Lexington	1.00	7/27/2018	$231,200	2000	1,590	$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	300 Claiborne								$213,000			488
Not	460 Claiborne	-$2,026		-$4,580	$15,457	$5,000			$242,850	-14%		
Not	2160 Sherman	-$5,672		-$2,650	-$20,406				$236,272	-11%		
Not	215 Lexington	$1,072		$3,468	-$2,559	-$5,000			$228,180	-7%		
											-11%	

This set of matched pairs shows a minor negative impact for this property. I was unable to confirm the sales price or conditions of this sale. The best indication of value is based on 215 Lexington, which required the least adjusting and supports a -7% impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
	Adjoins	350 Claiborne	1.00	7/20/2018	$245,000	2002	1,688	$145.14	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	$229,000	2007	1,446	$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	$265,000	2005	1,735	$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	215 Lexington	1.00	7/27/2018	$231,200	2000	1,590	$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	350 Claiborne								$245,000			720
Not	460 Claiborne	-$3,223		-$5,725	$30,660	$5,000			$255,712	-4%		
Not	2160 Sherman	-$7,057		-$3,975	-$5,743				$248,225	-1%		
Not	215 Lexington	-$136		$2,312	$11,400	-$5,000			$239,776	2%		
											-1%	

The following photograph shows the light landscaping buffer and the distant view of panels that was included as part of the marketing package for this property. The panels are visible somewhat on the left and somewhat through the trees in the center of the photograph. The first photograph is from the home, with the second photograph showing the view near the rear of the lot.

This set of matched pairs shows a no negative impact for this property. The range of adjusted impacts is -4% to +2%. The best indication is -1%, which as described above is within the typical market static and supports no impact on adjoining property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
	Adjoins	370 Claiborne	1.06	8/22/2019	$273,000	2005	1,570	$173.89	4/3	2-Car	2-Story	Brick
	Not	2160 Sherman	1.46	6/1/2019	$265,000	2005	1,735	$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	2290 Dry	1.53	5/2/2019	$239,400	1988	1,400	$171.00	3/2.5	2-Car	R/FBsmt	Brick
	Not	125 Lexington	1.20	4/17/2018	$240,000	2001	1,569	$152.96	3/3	2-Car	Split	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	370 Claiborne								$273,000			930
Not	2160 Sherman	$1,831		$0	-$20,161				$246,670	10%		
Not	2290 Dry	$2,260		$20,349	$23,256	$2,500			$287,765	-5%		
Not	125 Lexington	$9,951		$4,800					$254,751	7%		
											4%	

This set of matched pairs shows a general positive impact for this property. The range of adjusted impacts is -5% to +10%. The best indication is +7%. I typically consider measurements of +/-5% to be within the typical variation in real estate transactions. This indication is higher than that and suggests a positive relationship.

The photograph from the listing shows panels visible between the home and the trampoline shown in the picture.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	330 Claiborne	1.00	12/10/2019	$282,500	2003	1,768	$159.79	3/3	2-Car	Ranch	Brick/pool
Not	895 Osborne	1.70	9/16/2019	$249,900	2002	1,705	$146.57	3/2	2-Car	Ranch	Brick/pool
Not	2160 Sherman	1.46	6/1/2019	$265,000	2005	1,735	$152.74	3/3	2-Car	R/FBsmt	Brick
Not	215 Lexington	1.00	7/27/2018	$231,200	2000	1,590	$145.41	5/4	2-Car	Ranch	Brick

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	330 Claiborne								$282,500			665
Not	895 Osborne	$1,790		$1,250	$7,387	$5,000		$0	$265,327	6%		
Not	2160 Sherman	$4,288		-$2,650	$4,032			$20,000	$290,670	-3%		
Not	215 Lexington	$9,761		$3,468	$20,706	-$5,000		$20,000	$280,135	1%		
											1%	

This set of matched pairs shows a general positive impact for this property. The range of adjusted impacts is -3% to +6%. The best indication is +6%. I typically consider measurements of +/-5% to be within the typical variation in real estate transactions. This indication is higher than that and suggests a positive relationship. The landscaping buffer on these is considered light with a fair visibility of the panels from most of these comparables and only thin landscaping buffers separating the homes from the solar panels.

The five matched pairs considered in this analysis includes two that show no impact on value, one that shows a negative impact on value, and two that show a positive impact. The negative indication supported by one matched pair is -7% and the positive impacts are +6% and +7%. The two neutral indications show impacts of -1% and +3%. The average indicated impact is +0% when all five of these indicators are blended.

Furthermore, the comments of the local real estate broker strongly support the data that shows no negative impact on value due to the proximity to the solar farm.

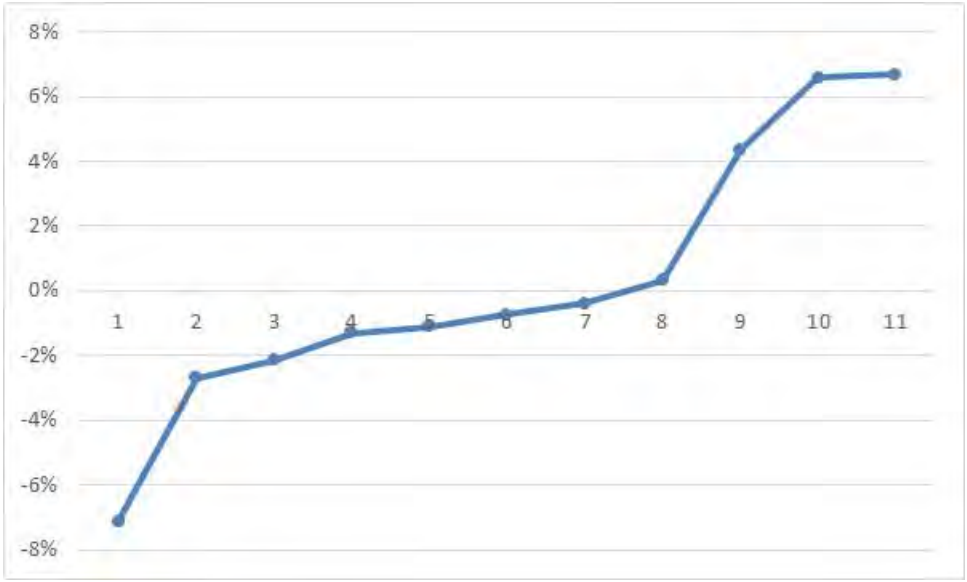
Conclusion

The solar farm matched pairs shown above have similar characteristics to each other in terms of population, but with several outliers showing solar farms in far more urban areas. The median income for the population within 1 mile of a solar farm among this subset of matched pairs is $80,778 with a median housing unit value of $320,076. Most of the comparables are under $500,000 in the home price, with $483,333 being the high end of the set, though I have matched pairs in other states over $1,000,000 in price adjoining large solar farms. The predominate adjoining uses are residential and agricultural. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Virginia and adjoining states as well as the proposed subject property.

Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property.

Matched Pair Summary							Adj. Uses By Acreage				1 mile Radius (2010-2020 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	$81,022	$374,453	Light
2	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	$80,773	$320,076	Light
3	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	$51,410	$155,208	Medium
4	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	$120,861	$483,333	Med to Hvy
5	Crittenden	Crittenden	KY	34	2.70	40	22%	51%	27%	0%	1,419	$60,198	$178,643	Light
	Average			915	135.94	90	17%	62%	21%	0%	470	$78,853	$302,343	
	Median			322	20.00	70	14%	52%	20%	0%	203	$80,773	$320,076	
	High			3,500	617.00	160	37%	98%	46%	1%	1,419	$120,861	$483,333	
	Low			34	2.70	40	2%	39%	0%	0%	74	$51,410	$155,208	

On the following page is a summary of the matched pairs for all of the solar farms noted above. They show a pattern of results from -7% to +7% with an average of 0% and a median finding of +1%. As can be seen in the chart of those results below, most of the data points are between -3% and +5%. This variability is common with real estate and consistent with market "static." I therefore conclude that these results strongly support an indication of no impact on property value due to the adjacent solar farm.



Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	Area	MW	Approx Distance	Tax ID/Address	Date	Sale Price	Adj. Sale Price	% Diff	Veg. Buffer
1	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr	Jan-17	$295,000			Light
							6801 Middle	Dec-17	$249,999	$296,157	0%	
2	Walker	Barhamsville	VA	Rural	20	250	5241 Barham	Oct-18	$264,000			Light
							9252 Ordinary	Jun-19	$277,000	$246,581	7%	
3	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr	Aug-19	$385,000			Light
							2393 Old Chapel	Aug-20	$330,000	$389,286	-1%	
4	Sappony	Stony Creek	VA	Rural	20	1425	12511 Palestine	Jul-18	$128,400			Medium
							6494 Rocky Branch	Nov-18	$100,000	$131,842	-3%	
5	Spotsylvania	Paytes	VA	Rural	617	1270	12901 Orange Plnk	Aug-20	$319,900			Medium
							12717 Flintlock	Dec-20	$290,000	$326,767	-2%	
6	Spotsylvania	Paytes	VA	Rural	617	1950	9641 Nottoway	May-20	$449,900			Medium
							11626 Forest	Aug-20	$489,900	$430,246	4%	
7	Spotsylvania	Paytes	VA	Rural	617	1171	13353 Post Oak	Sep-20	$300,000			Heavy
							12810 Catharpin	Jan-20	$280,000	$299,008	0%	
8	Crittenden	Crittenden	KY	Suburban	2.7	373	250 Claiborne	Jan-19	$120,000			Light
							315 N Fork	May-19	$107,000	$120,889	-1%	
9	Crittenden	Crittenden	KY	Suburban	2.7	488	300 Claiborne	Sep-18	$213,000			Light
							1795 Bay Valley	Dec-17	$231,200	$228,180	-7%	
10	Crittenden	Crittenden	KY	Suburban	2.7	720	350 Claiborne	Jul-18	$245,000			Light
							2160 Sherman	Jun-19	$265,000	$248,225	-1%	
11	Crittenden	Crittenden	KY	Suburban	2.7	930	370 Claiborne	Aug-19	$273,000			Light
							125 Lexington	Apr-18	$240,000	$254,751	7%	

	MW	Avg. Distance
Average	176.53	1,003
Median	20.00	1,171
High	617.00	1,950
Low	2.70	250

	Indicated Impact
Average	0%
Median	-1%
High	7%
Low	-7%

I have further broken down these results based on the MWs, Landscaping, and distance from panel to show the following range of findings for these different categories.

This breakdown shows no homes between 100-200 homes. Solar farms up to 75 MW show homes between 201 and 500 feet with no impact on value. Most of the findings are for homes between 201 and 500 feet.

Light landscaping screens are showing no impact on value at any distances, though solar farms over 75.1 MW only show Medium and Heavy landscaping screens in the 3 examples identified.

MW Range 4.4 to 10 Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	-4%	3%	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	-4%	3%	N/A	N/A	N/A	N/A	N/A	N/A
High	N/A	-1%	7%	N/A	N/A	N/A	N/A	N/A	N/A
Low	N/A	-7%	-1%	N/A	N/A	N/A	N/A	N/A	N/A

10.1 to 30 Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
Median	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
High	N/A	7%	0%	N/A	N/A	-3%	N/A	N/A	N/A
Low	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A

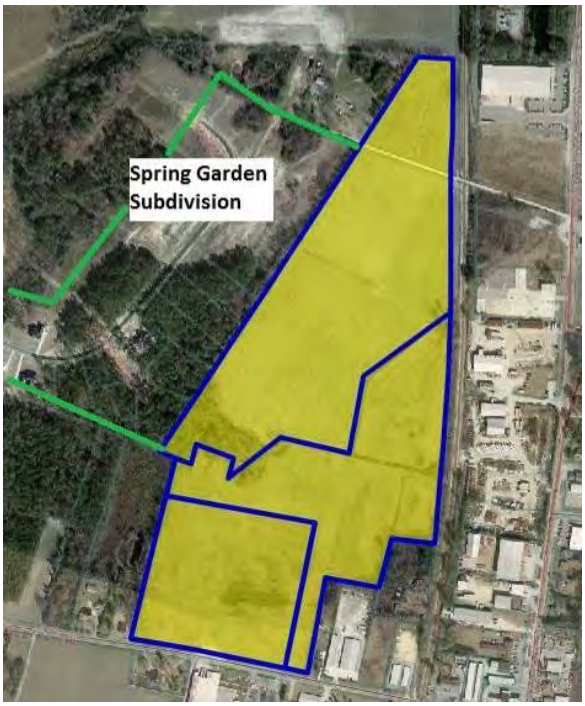
30.1 to 75 Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

75.1+ Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	N/A	N/A	N/A	N/A	1%	N/A	N/A	N/A
Median	N/A	N/A	N/A	N/A	N/A	1%	N/A	N/A	N/A
High	N/A	N/A	N/A	N/A	N/A	4%	N/A	N/A	N/A
Low	N/A	N/A	N/A	N/A	N/A	-2%	N/A	N/A	N/A

B. Southeastern USA Data – Over 5 MW

1. Matched Pair – AM Best Solar Farm, Goldsboro, NC

This 5 MW solar farm adjoins Spring Garden Subdivision which had new homes and lots available for new construction during the approval and construction of the solar farm. The recent home sales have ranged from $200,000 to $250,000. This subdivision sold out the last homes in late 2014. The solar farm is clearly visible particularly along the north end of this street where there is only a thin line of trees separating the solar farm from the single-family homes.

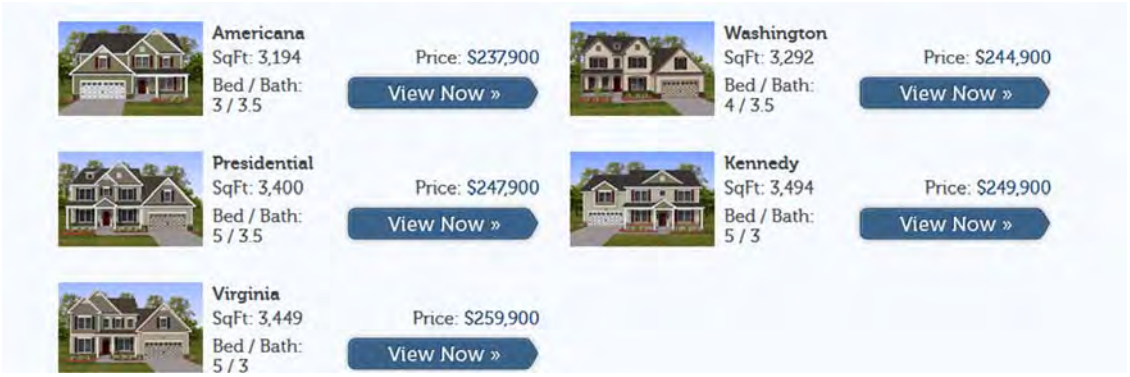


Homes backing up to the solar farm are selling at the same price for the same floor plan as the homes that do not back up to the solar farm in this subdivision. According to the builder, the solar farm has been a complete non-factor. Not only do the sales show no difference in the price paid for the various homes adjoining the solar farm versus not adjoining the solar farm, but there are actually more recent sales along the solar farm than not. There is no impact on the sellout rate, or time to sell for the homes adjoining the solar farm.

I spoke with a number of owners who adjoin the solar farm and none of them expressed any concern over the solar farm impacting their property value.

The data presented on the following page shows multiple homes that have sold in 2013 and 2014 adjoining the solar farm at prices similar to those not along the solar farm. These series of sales indicate that the solar farm has no impact on the adjoining residential use.

The homes that were marketed at Spring Garden are shown below.



The homes adjoining the solar farm are considered to have a light landscaping screen as it is a narrow row of existing pine trees supplemented with evergreen plantings.

Matched Pairs
As of Date: 9/3/2014

Adjoining Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	Style
3600195570	Helm	0.76	Sep-13	$250,000	2013	3,292	$75.94	2 Story
3600195361	Leak	1.49	Sep-13	$260,000	2013	3,652	$71.19	2 Story
3600199891	McBrayer	2.24	Jul-14	$250,000	2014	3,292	$75.94	2 Story
3600198632	Foresman	1.13	Aug-14	$253,000	2014	3,400	$74.41	2 Story
3600196656	Hinson	0.75	Dec-13	$255,000	2013	3,453	$73.85	2 Story
	Average	1.27		$253,600	2013.4	3,418	$74.27	
	Median	1.13		$253,000	2013	3,400	$74.41	

Adjoining Sales After Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	Style
0	Feddersen	1.56	Feb-13	$247,000	2012	3,427	$72.07	Ranch
0	Gentry	1.42	Apr-13	$245,000	2013	3,400	$72.06	2 Story
	Average	1.49		$246,000	2012.5	3,414	$72.07	
	Median	1.49		$246,000	2012.5	3,414	$72.07	

Adjoining Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	Style
3600183905	Carter	1.57	Dec-12	$240,000	2012	3,347	$71.71	1.5 Story
3600193097	Kelly	1.61	Sep-12	$198,000	2012	2,532	$78.20	2 Story
3600194189	Hadwan	1.55	Nov-12	$240,000	2012	3,433	$69.91	1.5 Story
	Average	1.59		$219,000	2012	2,940	$74.95	
	Median	1.59		$219,000	2012	2,940	$74.95	

Nearby Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	Style
3600193710	Barnes	1.12	Oct-13	$248,000	2013	3,400	$72.94	2 Story
3601105180	Nackley	0.95	Dec-13	$253,000	2013	3,400	$74.41	2 Story
3600192528	Mattheis	1.12	Oct-13	$238,000	2013	3,194	$74.51	2 Story
3600198928	Beckman	0.93	Mar-14	$250,000	2014	3,292	$75.94	2 Story
3600196965	Hough	0.81	Jun-14	$224,000	2014	2,434	$92.03	2 Story
3600193914	Preskitt	0.67	Jun-14	$242,000	2014	2,825	$85.66	2 Story
3600194813	Bordner	0.91	Apr-14	$258,000	2014	3,511	$73.48	2 Story
3601104147	Shaffer	0.73	Apr-14	$255,000	2014	3,453	$73.85	2 Story
	Average	0.91		$246,000	2013.625	3,189	$77.85	
	Median	0.92		$249,000	2014	3,346	$74.46	

Nearby Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	Style
3600191437	Thomas	1.12	Sep-12	$225,000	2012	3,276	$68.68	2 Story
3600087968	Lilley	1.15	Jan-13	$238,000	2012	3,421	$69.57	1.5 Story
3600087654	Burke	1.26	Sep-12	$240,000	2012	3,543	$67.74	2 Story
3600088796	Hobbs	0.73	Sep-12	$228,000	2012	3,254	$70.07	2 Story
	Average	1.07		$232,750	2012	3,374	$69.01	
	Median	1.14		$233,000	2012	3,349	$69.13	

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	**Median**	**Average**	**Median**
Sales Price	$253,600	$253,000	$246,000	$249,000
Year Built	2013	2013	2014	2014
Size	3,418	3,400	3,189	3,346
Price/SF	$74.27	$74.41	$77.85	$74.46

Percentage Differences

Median Price	-2%
Median Size	-2%
Median Price/SF	0%

I note that 2308 Granville Drive sold again in November 2015 for $267,500, or $7,500 more than when it was purchased new from the builder two years earlier (Tax ID 3600195361, Owner: Leak). The neighborhood is clearly showing appreciation for homes adjoining the solar farm.

The Median Price is the best indicator to follow in any analysis as it avoids outlying samples that would otherwise skew the results. The median sizes and median prices are all consistent throughout the sales both before and after the solar farm whether you look at sites adjoining or nearby to the solar farm. The average size for the homes nearby the solar farm shows a smaller building size and a higher price per square foot. This reflects a common occurrence in real estate where the price per square foot goes up as the size goes down. So even comparing averages the indication is for no impact, but I rely on the median rates as the most reliable indication for any such analysis.

I have also considered four more recent resales of homes in this community as shown on the following page. These comparable sales adjoin the solar farm at distances ranging from 315 to 400 feet. The matched pairs show a range from -9% to +6%. The range of the average difference is -2% to +1% with an average of 0% and a median of +0.5%. These comparable sales support a finding of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	103 Granville Pl	1.42	7/27/2018	$265,000	2013	3,292	$80.50	4/3.5	2-Car	2-Story		385
	Not	2219 Granville	1.15	1/8/2018	$260,000	2012	3,292	$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	$267,000	2018	3,053	$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	$265,000	2014	2,816	$94.11	5/3.5	2-Car	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	103 Granville Pl								$265,000		-2%
Not	2219 Granville	$4,382		$1,300	$0				$265,682	0%	
Not	634 Friendly	-$8,303		-$6,675	$16,721	-$10,000			$258,744	2%	
Not	2403 Granville	-$6,029		-$1,325	$31,356				$289,001	-9%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	104 Erin	2.24	6/19/2017	$280,000	2014	3,549	$78.90	5/3.5	2-Car	2-Story		315
	Not	2219 Granville	1.15	1/8/2018	$260,000	2012	3,292	$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	$267,000	2018	3,053	$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	$265,000	2014	2,816	$94.11	5/3.5	2-Car	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	104 Erin								$280,000		0%
Not	2219 Granville	-$4,448		$2,600	$16,238				$274,390	2%	
Not	634 Friendly	-$17,370		-$5,340	$34,702	-$10,000			$268,992	4%	
Not	2403 Granville	-$15,029		$0	$48,285				$298,256	-7%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2312 Granville	0.75	5/1/2018	$284,900	2013	3,453	$82.51	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	$260,000	2012	3,292	$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	$267,000	2018	3,053	$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	$265,000	2014	2,816	$94.11	5/3.5	2-Car	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2312 Granville								$284,900		1%
Not	2219 Granville	$2,476		$1,300	$10,173				$273,948	4%	
Not	634 Friendly	-$10,260		-$6,675	$27,986	-$10,000			$268,051	6%	
Not	2403 Granville	-$7,972		-$1,325	$47,956				$303,659	-7%	

Adjoining Residential Sales After Solar Farm Approved

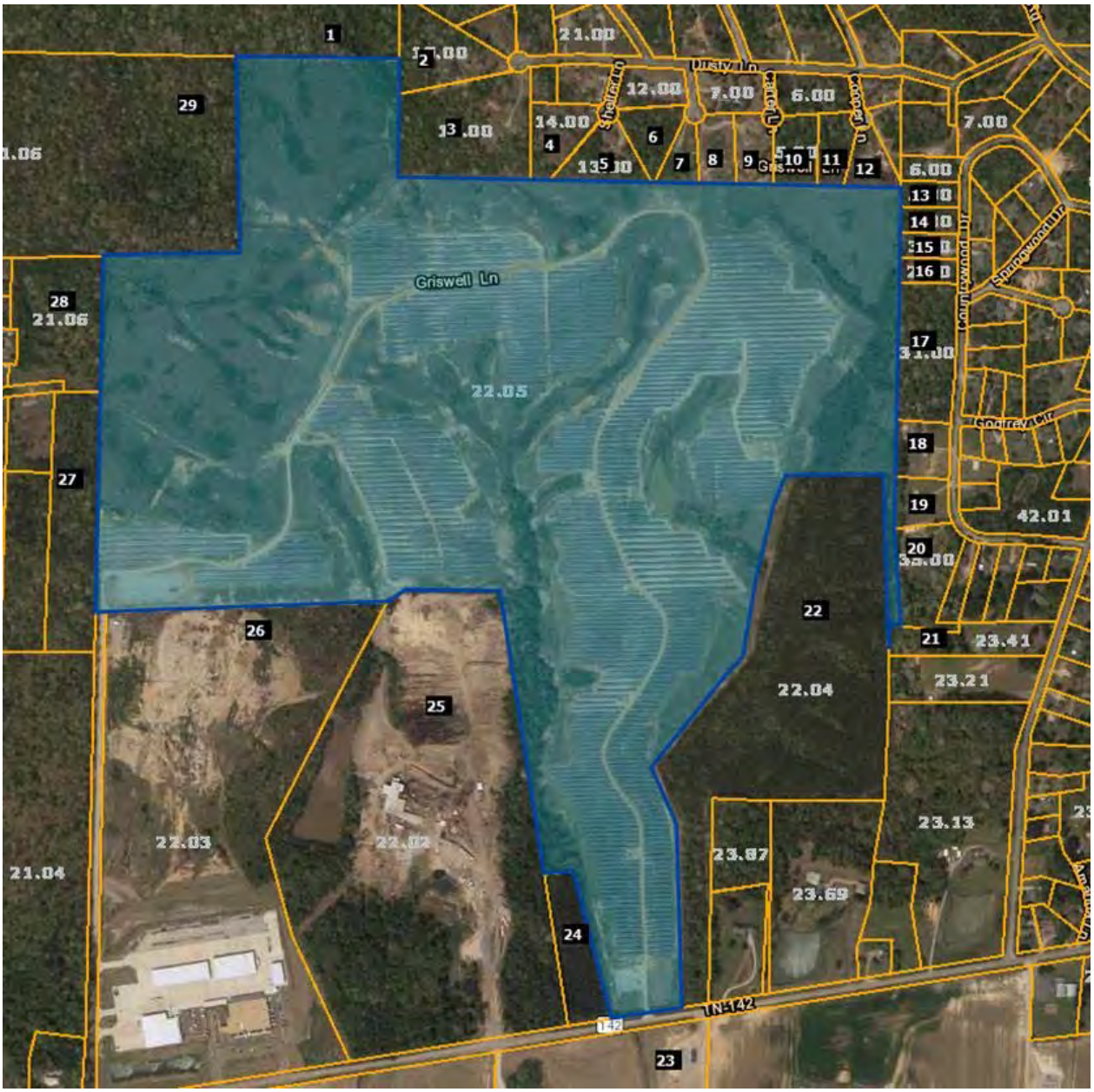
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2310 Granville	0.76	5/14/2019	$280,000	2013	3,292	$85.05	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	$260,000	2012	3,292	$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	$267,000	2018	3,053	$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	$265,000	2014	2,816	$94.11	5/3.5	2-Car	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2310 Granville								$280,000		1%
Not	2219 Granville	$10,758		$1,300	$0				$272,058	3%	
Not	634 Friendly	-$1,755		-$6,675	$16,721	-$10,000			$265,291	5%	
Not	2403 Granville	$469		-$1,325	$31,356				$295,500	-6%	

I have also considered the original sales prices in this subdivision relative to the recent resale values as shown in the chart below. This rate of appreciation is right at 2.5% over the last 6 years. Zillow indicates that the average home value within the 27530-zip code as of January 2014 was $101,300 and as of January 2020 that average is $118,100. This indicates an average increase in the market of 2.37%. I conclude that the appreciation of the homes adjoining the solar farm are not impacted by the presence of the solar farm based on this data.

	Address	Initial Sale Date	Price	Second Sale Date	Price	Year Diff	Apprec.	% Apprec.	Apprec. %/Year
1	103 Granville Pl	4/1/2013	$245,000	7/27/2018	$265,000	5.32	$20,000	8.16%	1.53%
2	105 Erin	7/1/2014	$250,000	6/19/2017	$280,000	2.97	$30,000	12.00%	4.04%
3	2312 Granville	12/1/2013	$255,000	5/1/2015	$262,000	1.41	$7,000	2.75%	1.94%
4	2312 Granville	5/1/2015	$262,000	5/1/2018	$284,900	3.00	$22,900	8.74%	2.91%
5	2310 Granville	8/1/2013	$250,000	5/14/2019	$280,000	5.79	$30,000	12.00%	2.07%
6	2308 Granville	9/1/2013	$260,000	11/12/2015	$267,500	2.20	$7,500	2.88%	1.31%
7	2304 Granville	9/1/2012	$198,000	6/1/2017	$225,000	4.75	$27,000	13.64%	2.87%
8	102 Erin	8/1/2014	$253,000	11/1/2016	$270,000	2.25	$17,000	6.72%	2.98%
								Average	2.46%
								Median	2.47%

2. Matched Pair – Mulberry, Selmer, TN



This 16 MW solar farm was built in 2014 on 208.89 acres with the closest home being 480 feet.

This solar farm adjoins two subdivisions with Central Hills having a mix of existing and new construction homes. Lots in this development have been marketed for $15,000 each with discounts offered for multiple lots being used for a single home site. I spoke with the agent with Rhonda Wheeler and Becky Hearnsberger with United County Farm & Home Realty who noted that they have seen no impact on lot or home sales due to the solar farm in this community.

I have included a map below as well as data on recent sales activity on lots that adjoin the solar farm or are near the solar farm in this subdivision both before and after the announced plan for this solar farm facility. I note that using the same method I used to breakdown the adjoining uses at the subject property I show that the predominant adjoining uses are residential and agricultural, which is consistent with the location of most solar farms.

Adjoining Use Breakdown

	Acreage	Parcels
Commercial	3.40%	0.034
Residential	12.84%	79.31%
Agri/Res	10.39%	3.45%
Agricultural	73.37%	13.79%
Total	**100.00%**	**100.00%**

I have run a number of direct matched comparisons on the sales adjoining this solar farm as shown below. These direct matched pairs include some of those shown above as well as additional more recent sales in this community. In each of these I have compared the one sale adjoining the solar farm to multiple similar homes nearby that do not adjoin a solar farm to look for any potential impact from the solar farm.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
3	Adjoins	491 Dusty	6.86	10/28/2016	$176,000	2009	1,801	$97.72	3/2	2-Gar	Ranch	
	Not	820 Lake Trail	1.00	6/8/2018	$168,000	2013	1,869	$89.89	4/2	2-Gar	Ranch	
	Not	262 Country	1.00	1/17/2018	$145,000	2000	1,860	$77.96	3/2	2-Gar	Ranch	
	Not	35 April	1.15	8/16/2016	$185,000	2016	1,980	$93.43	3/2	2-Gar	Ranch	

Adjoining Sales Adjusted

Parcel	Solar	Address	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
3	Adjoins	491 Dusty							$176,000		480
	Not	820 Lake Trail	-$8,324	$12,000	-$3,360	-$4,890			$163,426	7%	
	Not	262 Country	-$5,450	$12,000	$6,525	-$3,680			$154,396	12%	
	Not	35 April	$1,138	$12,000	-$6,475	-$13,380			$178,283	-1%	
									Average	6%	

The best matched pair is 35 April Loop, which required the least adjustment and indicates a -1% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
12	Adjoins	57 Cooper	1.20	2/26/2019	$163,000	2011	1,586	$102.77	3/2	2-Gar	1.5 Story	Pool
	Not	191 Amelia	1.00	8/3/2018	$132,000	2005	1,534	$86.05	3/2	Drive	Ranch	
	Not	75 April	0.85	3/17/2017	$134,000	2012	1,588	$84.38	3/2	2-Crprt	Ranch	
	Not	345 Woodland	1.15	12/29/2016	$131,000	2002	1,410	$92.91	3/2	1-Gar	Ranch	

Adjoining Sales Adjusted

Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
12	Adjoins	57 Cooper	$163,000							$163,000		685
	Not	191 Amelia	$132,000	$2,303		$3,960	$2,685	$10,000	$5,000	$155,947	4%	
	Not	75 April	$134,000	$8,029	$4,000	-$670	-$135	$5,000	$5,000	$155,224	5%	
	Not	345 Woodland	$131,000	$8,710		$5,895	$9,811		$5,000	$160,416	2%	
										Average	4%	

The best matched pair is 191 Amelia, which was most similar in time frame of sale and indicates a +4% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
15	Adjoins	297 Country	1.00	9/30/2016	$150,000	2002	1,596	$93.98	3/2	4-Gar	Ranch	
	Not	185 Dusty	1.85	8/17/2015	$126,040	2009	1,463	$86.15	3/2	2-Gar	Ranch	
	Not	53 Glen	1.13	3/9/2017	$126,000	1999	1,475	$85.42	3/2	2-Gar	Ranch	Brick

Adjoining Sales Adjusted

Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
15	Adjoins	297 Country	$150,000							$150,000		650
	Not	185 Dusty	$126,040	$4,355		-$4,411	$9,167	$10,000		$145,150	3%	
	Not	53 Glen	$126,000	-$1,699		$1,890	$8,269	$10,000		$144,460	4%	
										Average	3%	

The best matched pair is 53 Glen, which was most similar in time frame of sale and required less adjustment. It indicates a +4% increase in value due to the solar farm adjacency.

The average indicated impact from these three sets of matched pairs is +4%, which suggests a mild positive relationship due to adjacency to the solar farm. The landscaping buffer for this project is mostly natural tree growth that was retained as part of the development but much of the trees separating the panels from homes are actually on the lots for the homes themselves. I therefore consider the landscaping buffer to be thin to moderate for these adjoining homes.

I have also looked at several lot sales in this subdivision as shown below.

These are all lots within the same community and the highest prices paid are for lots one parcel off from the existing solar farm. These prices are fairly inconsistent, though they do suggest about a $3,000 loss in the lots adjoining the solar farm. This is an atypical finding and additional details suggest there is more going on in these sales than the data crunching shows. First of all Parcel 4 was purchased by the owner of the adjoining home and therefore an atypical buyer seeking to expand a lot and the site is not being purchased for home development. Moreover, using the SiteToDoBusiness demographic tools, I found that the 1-mile radius around this development is expecting a total population increase over the next 5 years of 3 people. This lack of growing demand for lots is largely explained in that context. Furthermore, the fact that finished home sales as shown above are showing no sign of a negative impact on property value makes this data unreliable and inconsistent with the data shown in sales to an end user. I therefore place little weight on this outlier data.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	4/18/2019 Adj for Time	$/AC	4/18/2019 Adj for Time
4	Adjoins	Shelter	2.05	10/25/2017	$16,000	$16,728	$7,805	$8,160
10	Adjoins	Carter	1.70	8/2/2018	$14,000	$14,306	$8,235	$8,415
11	Adjoins	Cooper	1.28	9/17/2018	$12,000	$12,215	$9,375	$9,543
	Not	75 Dusty	1.67	4/18/2019	$20,000	$20,000	$11,976	$11,976
	Not	Lake Trl	1.47	11/7/2018	$13,000	$13,177	$8,844	$8,964
	Not	Lake Trl	1.67	4/18/2019	$20,000	$20,000	$11,976	$11,976

	Adjoins	Per Acre	Not Adjoins	Per Acre	% DIF/Lot	% DIF/AC
Average	$14,416	$8,706	$17,726	$10,972	19%	21%
Median	$14,306	$8,415	$20,000	$11,976	28%	30%
High	$16,728	$9,543	$20,000	$11,976	16%	20%
Low	$12,215	$8,160	$13,177	$8,964	7%	9%

3. Matched Pair – Leonard Road Solar Farm, Hughesville, MD

This 5 MW solar farm is located on 47 acres and mostly adjoins agricultural and residential uses to the west, south and east as shown above. The property also adjoins retail uses and a church. I looked at a 2016 sale of an adjoining home with a positive impact on value adjoining the solar farm of 2.90%. This is within typical market friction and supports an indication of no impact on property value.

I have shown this data below. The landscaping buffer is considered heavy.

Leonardtown Road Solar Farm, Hughesville, MD

Nearby Residential Sale After Solar Farm Construction

Address	Solar Farm	Acres	Date Sold	Sales Price*	Built	GBA	$/GBA	Style	BR/BA	Bsmt	Park	Upgrades	Other
14595 Box Elder Ct	Adjoins	3.00	2/12/2016	$291,000	1991	2,174	$133.85	Colonial	5/2.5	No	2 Car Att	N/A	Deck
15313 Bassford Rd	Not	3.32	7/20/2016	$329,800	1990	2,520	$130.87	Colonial	3/2.5	Finished	2 Car Att	Custom	Scr Por/Patio

*$9,000 concession deducted from sale price for Box Elder and $10,200 deducted from Bassford

Adjoining Sales Adjusted			Adjustments					
Address	Date Sold	Sales Price	Time	GLA	Bsmt	Upgrades	Other	Total
14595 Box Elder Ct	2/12/2016	$291,000						$291,000
15313 Bassford Rd	7/20/2016	$329,800	-$3,400	-$13,840	-$10,000	-$15,000	-$5,000	$282,560

Difference Attributable to Location $8,440
2.90%

This is within typical market friction and supports an indication of no impact on property value.

4. Matched Pair – Gastonia SC Solar, Gastonia, NC

This 5 MW project is located on the south side of Neal Hawkins Road just outside of Gastonia. The property identified above as Parcel 4 was listed for sale while this solar farm project was going

through the approval process. The property was put under contract during the permitting process with the permit being approved while the due diligence period was still ongoing. After the permit was approved the property closed with no concerns from the buyer. I spoke with Jennifer Bouvier, the broker listing the property and she indicated that the solar farm had no impact at all on the sales price. She considered some nearby sales to set the price and the closing price was very similar to the asking price within the typical range for the market. The buyer was aware that the solar farm was coming and they had no concerns.

This two-story brick dwelling was sold on March 20, 2017 for $270,000 for a 3,437 square foot dwelling built in 1934 in average condition on 1.42 acres. The property has four bedrooms and two bathrooms. The landscaping screen is light for this adjoining home due to it being a new planted landscaping buffer.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Adjoins	609 Neal Hawkins	1.42	3/20/2017	$270,000	1934	3,427	$78.79	4/2	Open	2-Brick	
Not	1418 N Modena	4.81	4/17/2018	$225,000	1930	2,906	$77.43	3/3	2-Crprt	2-Brick	
Not	363 Dallas Bess	2.90	11/29/2018	$265,500	1968	2,964	$89.57	3/3	Open	FinBsmt	
Not	1612 Dallas Chry	2.74	9/17/2018	$245,000	1951	3,443	$71.16	3/2	Open	2-Brick	Unfin bath

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
609 Neal Hawkins								$270,000			225
1418 N Modena	$7,319		$2,700	$32,271		-$10,000		$257,290	5%		
363 Dallas Bess	$746		-$27,081	$33,179	-$10,000		$53,100	$262,456	3%		
1612 Dallas Chry	$4,110		-$12,495	-$911			$10,000	$235,704	13%		
										7%	

I also considered the newer adjoining home identified as Parcel 5 that sold later in 2017 and it likewise shows no negative impact on property value. This is also considered a light landscaping buffer.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style
Adjoins	611 Neal Hawkins	0.78	7/6/2017	$288,000	1991	2,256	$127.66	5/3	2-Gar	1.5 Brick
Not	1211 Still Frst	0.51	7/30/2018	$280,000	1989	2,249	$124.50	3/3	2-Gar	Br Rnch
Not	2867 Colony Wds	0.52	8/14/2018	$242,000	1990	2,006	$120.64	3/3	2-Gar	Br Rnch
Not	1010 Strawberry	1.00	10/4/2018	$315,000	2002	2,330	$135.19	3/2.5	2-Gar	1.5 Brick

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
611 Neal Hawkins								$288,000			145
1211 Still Frst	$1,341		$2,800	$697				$284,838	1%		
2867 Colony Wds	$7,714		$1,210	$24,128				$275,052	4%		
1010 Strawberry	-$4,555		-$17,325	-$8,003	$5,000			$290,116	-1%		
										2%	

5. Matched Pair – Summit/Ranchlands Solar, Moyock, NC

This project is located at 1374 Caritoke Highway, Moyock, NC. This is an 80 MW facility on a parent tract of 2,034 acres. Parcels Number 48 and 53 as shown in the map above were sold in 2016. The project was under construction during the time period of the first of the matched pair sales and the permit was approved well prior to that in 2015.

I looked at multiple sales of adjoining and nearby homes and compared each to multiple comparables to show a range of impacts from -10% up to +11% with an average of +2% and a median of +3%. These ranges are well within typical real estate variation and supports an indication of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
48	Adjoins	129 Pinto	4.29	4/15/2016	$170,000	1985	1,559	$109.04	3/2	Drive	MFG		1,060
	Not	102 Timber	1.30	4/1/2016	$175,500	2009	1,352	$129.81	3/2	Drive	MFG		
	Not	120 Ranchland	0.99	10/1/2014	$170,000	2002	1,501	$113.26	3/2	Drive	MFG		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	129 Pinto								$170,000		-3%
Not	102 Timber	$276	$10,000	-$29,484	$18,809				$175,101	-3%	
Not	120 Ranchland	$10,735	$10,000	-$20,230	$4,598				$175,103	-3%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Adjoins	105 Pinto	4.99	12/16/2016	$206,000	1978	1,484	$138.81	3/2	Det G	Ranch	
Not	111 Spur	1.15	2/1/2016	$193,000	1985	2,013	$95.88	4/2	Gar	Ranch	
Not	103 Marshall	1.07	3/29/2017	$196,000	2003	1,620	$120.99	3/2	Drive	Ranch	
Not	127 Ranchland	0.00	6/9/2015	$219,900	1988	1,910	$115.13	3/2	Gar/3Det	Ranch	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
105 Pinto								$206,000			980
111 Spur	$6,747	$10,000	-$6,755	-$25,359				$177,633	14%		
103 Marshall	-$2,212	$10,000	-$24,500	-$8,227		$5,000		$176,212	14%		
127 Ranchland	$13,399	$10,000	-$10,995	-$24,523		-$10,000		$197,781	4%		
										11%	

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
15	Adjoins	318 Green View	0.44	9/15/2019	$357,000	2005	3,460	$103.18	4/4	2-Car	1.5 Brick		570
	Not	195 St Andrews	0.55	6/17/2018	$314,000	2002	3,561	$88.18	5/3	2-Car	2.0 Brick		
	Not	336 Green View	0.64	1/13/2019	$365,000	2006	3,790	$96.31	6/4	3-Car	2.0 Brick		
	Not	275 Green View	0.36	8/15/2019	$312,000	2003	3,100	$100.65	5/3	2-Car	2.0 Brick		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	318 Green View								$357,000		4%
Not	195 St Andrews	$12,040		$4,710	-$7,125	$10,000			$333,625	7%	
Not	336 Green View	$7,536		-$1,825	-$25,425			-$5,000	$340,286	5%	
Not	275 Green View	$815		$3,120	$28,986	$10,000			$354,921	1%	

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
29	Adjoins	164 Ranchland	1.01	4/30/2019	$169,000	1999	2,052	$82.36	4/2	Gar	MFG		440
	Not	150 Pinto	0.94	3/27/2018	$168,000	2017	1,920	$87.50	4/2	Drive	MFG		
	Not	105 Longhorn	1.90	10/10/2017	$184,500	2002	1,944	$94.91	3/2	Drive	MFG		
	Not	112 Pinto	1.00	7/27/2018	$180,000	2002	1,836	$98.04	3/2	Drive	MFG	Fenced	

	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
	Adjoins	164 Ranchland								$169,000		-10%
	Not	150 Pinto	$5,649		-$21,168	$8,085			$5,000	$165,566	2%	
	Not	105 Longhorn	$8,816	-$10,000	-$3,875	$7,175			$5,000	$191,616	-13%	
	Not	112 Pinto	$4,202		-$3,780	$14,824			$5,000	$200,245	-18%	

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	358 Oxford	10.03	9/16/2019	$478,000	2008	2,726	$175.35	3/3	2 Gar	Ranch		635
	Not	276 Summit	10.01	12/20/2017	$355,000	2006	1,985	$178.84	3/2	2 Gar	Ranch		
	Not	176 Providence	6.19	5/6/2019	$425,000	1990	2,549	$166.73	3/3	4 Gar	Ranch	Brick	
	Not	1601 B Caratoke	12.20	9/26/2019	$440,000	2016	3,100	$141.94	4/3.5	5 Gar	Ranch	Pool	

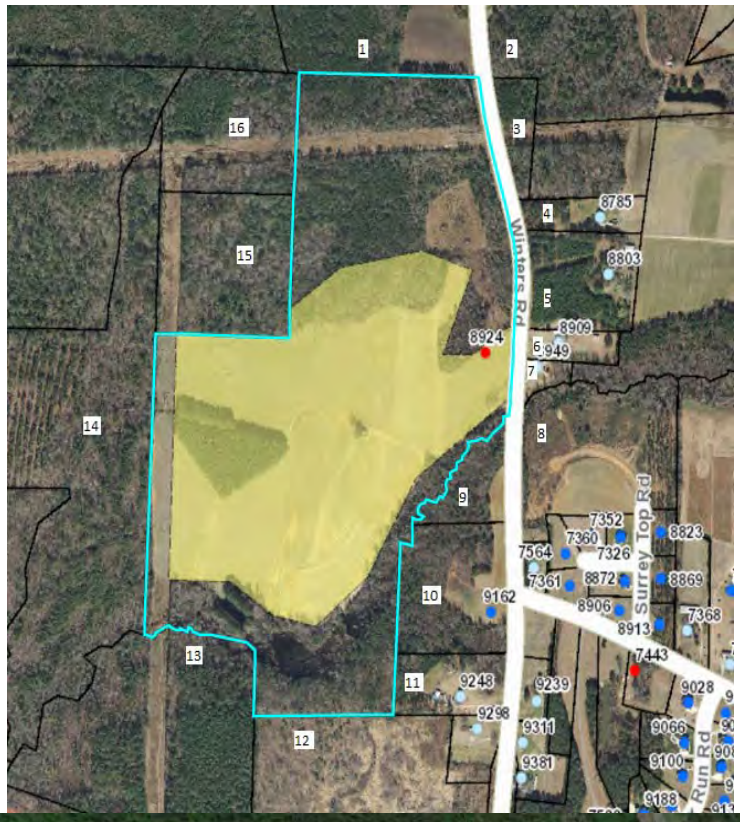
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
	Adjoins	358 Oxford								$478,000		5%
	Not	276 Summit	$18,996		$3,550	$106,017	$10,000			$493,564	-3%	
	Not	176 Providence	$4,763		$38,250	$23,609		-$10,000	-$25,000	$456,623	4%	
	Not	1601 B Caratoke	-$371	$50,000	-$17,600	-$42,467	-$5,000	-$10,000		$414,562	13%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
	Nearby	343 Oxford	10.01	3/9/2017	$490,000	2016	3,753	$130.56	3/3	2 Gar	1.5 Story	Pool	970
	Not	287 Oxford	10.01	9/4/2017	$600,000	2013	4,341	$138.22	5/4.5	8-Gar	1.5 Story	Pool	
	Not	301 Oxford	10.00	4/23/2018	$434,000	2013	3,393	$127.91	5/3	2 Gar	1.5 Story		
	Not	218 Oxford	10.01	4/4/2017	$525,000	2006	4,215	$124.56	4/3	4 Gar	1.5 Story	VG Barn	

	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
	Adjoins	343 Oxford								$490,000		3%
	Not	287 Oxford	-$9,051		$9,000	-$65,017	-$15,000	-$25,000		$494,932	-1%	
	Not	301 Oxford	-$14,995	-$10,000	$6,510	$36,838				$452,353	8%	
	Not	218 Oxford	-$1,150		$26,250	-$46,036		-$10,000	-$10,000	$484,064	1%	

6. Matched Pair – Tracy Solar, Bailey, NC



This project is located in rural Nash County on Winters Road with a 5 MW facility that was built in 2016 on 50 acres. A local builder acquired parcels 9 and 10 following construction as shown below

at rates comparable to other tracts in the area. They then built a custom home for an owner and sold that at a price similar to other nearby homes as shown in the matched pair data below. The retained woods provide a heavy landscaped buffer for this homesite.

Adjoining Land Sales After Solar Farm Completed

#	Solar Farm	TAX ID	Grantor	Grantee	Address	Acres	Date Sold	Sales Price	$/AC	Other
9 &10	Adjoins	316003 & 316004	Cozart	Kingsmill	9162 Winters	13.22	7/21/2016	$70,000	$5,295	
	Not	6056	Billingsly		427 Young	41	10/21/2016	$164,000	$4,000	
	Not	33211	Fulcher	Weikel	10533 Cone	23.46	7/18/2017	$137,000	$5,840	Doublewide, structures
	Not	106807	Perry	Gardner	Claude Lewis	11.22	8/10/2017	$79,000	$7,041	Gravel drive for sub, cleared
	Not	3437	Vaughan	N/A	11354 Old Lewis Sch	18.73	Listing	$79,900	$4,266	Small cemetery,wooded

Adjoining Sales Adjusted

Time	Acres	Location	Other	Adj $/Ac	% Diff
				$5,295	
$0	$400	$0	$0	$4,400	17%
-$292	$292	$0	-$500	$5,340	-1%
-$352	$0	$0	-$1,000	$5,689	-7%
-$213	$0	$0	$213	$4,266	19%
				Average	7%

Adjoining Residential Sales After Solar Farm Completed

#	Solar Farm	n	Address	Acres	Date Sold	Sales Price	Built	GLA	$/GLA	BR/BA	Style	Other
9 &10	Adjoins	gs	9162 Winters	13.22	1/5/2017	$255,000	2016	1,616	$157.80	3/2	Ranch	1296 sf wrkshp
	Not	w	7352 Red Fox	0.93	6/30/2016	$176,000	2010	1,529	$115.11	3/2	2-story	

Adjoining Sales Adjusted

Time	Acres	YB	GLA	Style	Other	Total	% Diff
						$255,000	
$0	$44,000	$7,392	$5,007	$5,000	$15,000	$252,399	1%

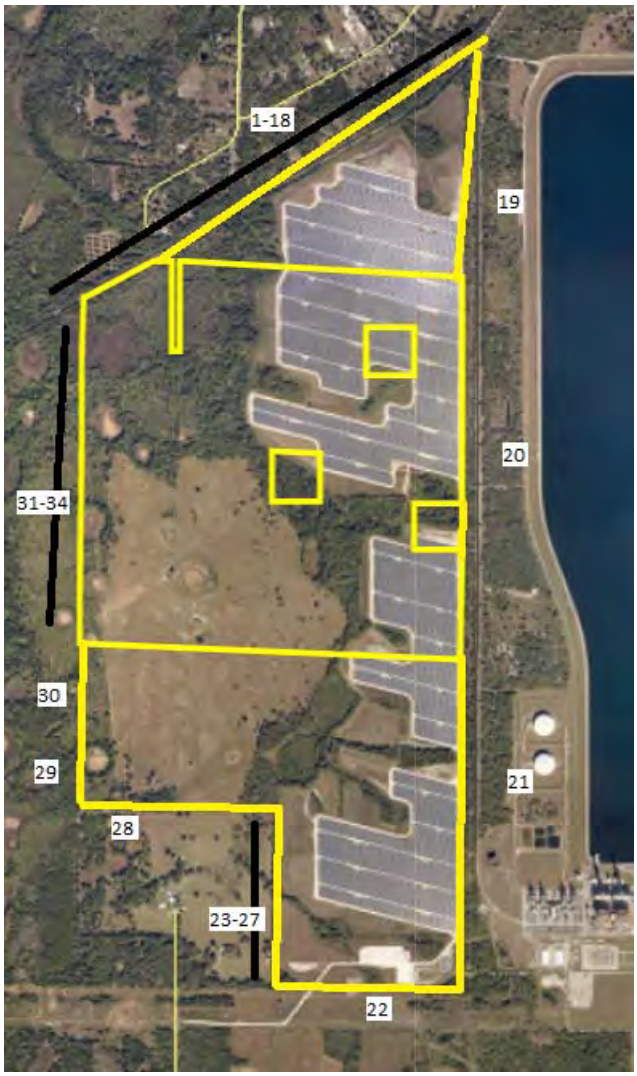
The comparables for the land show either a significant positive relationship or a mild negative relationship to having and adjoining solar farm, but when averaged together they show no negative impact. The wild divergence is due to the difficulty in comping out this tract of land and the wide variety of comparables used. The two comparables that show mild negative influences include a property that was partly developed as a residential subdivision and the other included a doublewide with some value and accessory agricultural structures. The tax assessed value on the improvements were valued at $60,000. So both of those comparables have some limitations for comparison. The two that show significant enhancement due to adjacency includes a property with a cemetery located in the middle and the other is a tract almost twice as large. Still that larger tract after adjustment provides the best matched pair as it required the least adjustment. I therefore conclude that there is no negative impact due to adjacency to the solar farm shown by this matched pair.

The dwelling that was built on the site was a build-to-suit and was compared to a nearby homesale of a property on a smaller parcel of land. I adjusted for that differenced based on a $25,000 value for a 1-acre home site versus the $70,000 purchase price of the larger subject tract. The other adjustments are typical and show no impact due to the adjacency to the solar farm.

The closest solar panel to the home is 780 feet away.

I note that the representative for Kingsmill Homes indicated that the solar farm was never a concern in purchasing the land or selling the home. He also indicated that they had built a number of nearby homes across the street and it had never come up as an issue.

7. Matched Pair – Manatee Solar Farm, Parrish, FL



This solar farm is located near Seminole Trail, Parrish, FL. The solar farm has a 74.50 MW output and is located on a 1,180.38-acre tract and was built in 2016. The tract is owned by Florida Power & Light Company.

I have considered the recent sale of 13670 Highland Road, Wimauma, Florida. This one-story, concrete block home is located just north of the solar farm and separated from the solar farm by a railroad corridor. This home is a 3 BR, 3 BA 1,512 s.f. home with a carport and workshop. The property includes new custom cabinets, granite counter tops, brand-new stainless-steel appliances, updated bathrooms and new carpet in the bedrooms. The home is sitting on 5 acres. The home was built in 1997.

I have compared this sale to several nearby homesales as part of this matched pair analysis as shown below. The landscaping separating the home from the solar farm is considered heavy.

Solar	TAX ID/Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Note
Adjoins	13670 Highland	5.00	8/21/2017	$255,000	1997	1,512	$168.65	3/3	Carport/Wrkshp	Ranch	Renov.
Not	2901 Arrowsmith	1.91	1/31/2018	$225,000	1979	1,636	$137.53	3/2	2 Garage/Wrkshp	Ranch	
Not	602 Butch Cassidy	1.00	5/5/2017	$220,000	2001	1,560	$141.03	3/2	N/A	Ranch	Renov.
Not	2908 Wild West	1.23	7/12/2017	$254,000	2003	1,554	$163.45	3/2	2 Garage/Wrkshp	Ranch	Renov.
Not	13851 Highland	5.00	9/13/2017	$240,000	1978	1,636	$146.70	4/2	3 Garage	Ranch	Renov.

		Adjoining Sales Adjusted								
Solar	**TAX ID/Address**	**Time**	**Acres**	**YB**	**GLA**	**BR/BA**	**Park**	**Note**	**Total**	**% Diff**
Adjoins	13670 Highland								$255,000	
Not	2901 Arrowsmith	$2,250	$10,000	$28,350	-$8,527	$5,000	-$10,000	$10,000	$262,073	-3%
Not	602 Butch Cassidy	-$2,200	$10,000	-$6,160	-$3,385	$5,000	$2,000		$225,255	12%
Not	2908 Wild West	$0	$10,000	-$10,668	-$3,432	$5,000	-$10,000		$244,900	4%
Not	13851 Highland	$0	$0	$31,920	-$9,095	$3,000	-$10,000		$255,825	0%
									Average	3%

The sales prices of the comparables before adjustments range from $220,000 to $254,000. After adjustments they range from $225,255 to $262,073. The comparables range from no impact to a strong positive impact. The comparables showing -3% and +4% impact on value is considered within a typical range of value and therefore not indicative of any impact on property value.

This set of matched pair data falls in line with the data seen in other states. The closest solar panel to the home at 13670 Highland is 1,180 feet. There is a wooded buffer between these two properties.

I have included a map showing the relative location of these properties below.

8. Matched Pair – McBride Place Solar Farm, Midland, NC

This project is located on Mount Pleasant Road, Midland, North Carolina. The property is on 627 acres on an assemblage of 974.59 acres. The solar farm was approved in early 2017 for a 74.9 MW facility.

I have considered the sale of 4380 Joyner Road which adjoins the proposed solar farm near the northwest section. This property was appraised in April of 2017 for a value of $317,000 with no consideration of any impact due to the solar farm in that figure. The property sold in November

2018 for $325,000 with the buyer fully aware of the proposed solar farm. The landscaping buffer relative to Joyner Road, Hayden Way, Chanel Court and Kristi Lane is considered medium, while the landscaping for the home at the north end of Chanel Court is considered very light.

I have considered the following matched pairs to the subject property.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	4380 Joyner	12.00	11/22/2017	$325,000	1979	1,598	$203.38	3/2	2xGar	Ranch	Outbldg
Not	3870 Elkwood	5.50	8/24/2016	$250,000	1986	1,551	$161.19	3/2.5	Det 2xGar	Craft	
Not	8121 Lower Rocky	18.00	2/8/2017	$355,000	1977	1,274	$278.65	2/2	2xCarprt	Ranch	Eq. Fac.
Not	13531 Cabarrus	7.89	5/20/2016	$267,750	1981	2,300	$116.41	3/2	2xGar	Ranch	

Adjoining Sales Adjusted

Time	Acres	YB	Condition	GLA	BR/BA	Park	Other	Total	% Diff
								$325,000	
$7,500	$52,000	-$12,250	$10,000	$2,273	-$2,000	$2,500	$7,500	$317,523	2%
$7,100	-$48,000	$4,970		$23,156	$0	$3,000	-$15,000	$330,226	-2%
$8,033	$33,000	-$3,749	$20,000	-$35,832	$0	$0	$7,500	$296,702	9%
								Average	3%

The home at 4380 Joyner Road is 275 feet from the closest solar panel.

I also considered the recent sale of a lot at 5800 Kristi Lane that is on the east side of the proposed solar farm. This 4.22-acre lot sold in December 2017 for $94,000. A home was built on this lot in 2019 with the closest point from home to panel at 689 feet. The home site is heavily wooded and their remains a wooded buffer between the solar panels and the home. I spoke with the broker, Margaret Dabbs, who indicated that the solar farm was considered a positive by both buyer and seller as it ensures no subdivision will be happening in that area. Buyers in this market are looking for privacy and seclusion.

The breakdown of recent lot sales on Kristi are shown below with the lowest price paid for the lot with no solar farm exposure, though that lot has exposure to Mt Pleasant Road South. Still the older lot sales have exposure to the solar farm and sold for higher prices than the front lot and adjusting for time would only increase that difference.

Adjoining Lot Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	$/AC	$/Lot
	Adjoins	5811 Kristi	3.74	5/1/2018	$100,000	$26,738	$100,000
	Adjoins	5800 Kristi	4.22	12/1/2017	$94,000	$22,275	$94,000
	Not	5822 Kristi	3.43	2/24/2020	$90,000	$26,239	$90,000

The lot at 5811 Kristi Lane sold in May 2018 for $100,000 for a 3.74-acre lot. The home that was built later in 2018 is 505 feet to the closest solar panel. This home then sold to a homeowner for $530,000 in April 2020. I have compared this home sale to other properties in the area as shown below.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	5811 Kristi	3.74	3/31/2020	$530,000	2018	3,858	$137.38	5/3.5	2 Gar	2-story	Cement Ext
Not	3915 Tania	1.68	12/9/2019	$495,000	2007	3,919	$126.31	3/3.5	2 Gar	2-story	3Det Gar
Not	6782 Manatee	1.33	3/8/2020	$460,000	1998	3,776	$121.82	4/2/2h	2 Gar	2-story	Water
Not	314 Old Hickory	1.24	9/20/2019	$492,500	2017	3,903	$126.18	6/4.5	2 Gar	2-story	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	5811 Kristi								$530,000		5%
Not	3915 Tania	$6,285		$27,225	-$3,852		-$20,000		$504,657	5%	
Not	6782 Manatee	$1,189		$46,000	$4,995	$5,000			$517,183	2%	
Not	314 Old Hickory	$10,680		$2,463	-$2,839	-$10,000			$492,803	7%	

After adjusting the comparables, I found that the average adjusted value shows a slight increase in value for the subject property adjoining a solar farm. As in the other cases, this is a mild positive impact on value but within the typical range of real estate transactions.

I also looked at 5833 Kristi Lane that sold on 9/14/2020 for $625,000. This home is 470 feet from the closest panel.

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Nearby	5833 Kristi	4.05	9/14/2020	$625,000	2008	4,373	$142.92	5/4	3-Car	2-Brick	
Not	4055 Dakeita	4.90	12/30/2020	$629,000	2005	4,427	$142.08	4/4	4-Car	2-Brick	4DetGar/Stable
Not	9615 Bales	2.16	6/30/2020	$620,000	2007	4,139	$149.79	4/5	3-Car	2-Stone	2DetGar
Not	9522 Bales	1.47	6/18/2020	$600,000	2007	4,014	$149.48	4/4.5	3-Car	2-Stone	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
5833 Kristi								$625,000			470
4055 Dakeita	-$9,220		$5,661	-$6,138		-$25,000		$594,303	5%		
9615 Bales	$6,455		$1,860	$28,042	-$10,000	-$15,000		$631,356	-1%		
9522 Bales	$7,233		$1,800	$42,930	-$5,000			$646,963	-4%		
										0%	

The average difference is 0% impact and the differences are all within a close range with this set of comparables and supports a finding of no impact on property value.

I have also looked at 4504 Chanel Court. This home sold on January 1, 2020 for $393,500 for this 3,010 square foot home built in 2004 with 3 bedrooms, 3.5 bathrooms, and a 3-car garage. This home includes a full partially finished basement that significantly complicates comparing this to other sales. This home previously sold on January 23, 2017 for $399,000. This was during the time that the solar farm was a known factor as the solar farm was approved in early 2017 and public discussions had already commenced. I spoke with Rachelle Killman with Real Estate Realty, LLC the buyer's agent for this transaction and she indicated that the solar farm was not a factor or consideration for the buyer. She noted that you could see the panels sort of through the trees, but it wasn't a concern for the buyer. She was not familiar with the earlier 2017 sale, but indicated that it was likely too high. This again goes back to the partially finished basement issue. The basement has a fireplace, and an installed 3/4 bathroom but otherwise bare studs and concrete floors with different buyers assigning varying value to that partly finished space. I also reached out to Don Gomez with Don Anthony Realty, LLC as he was the listing agent.

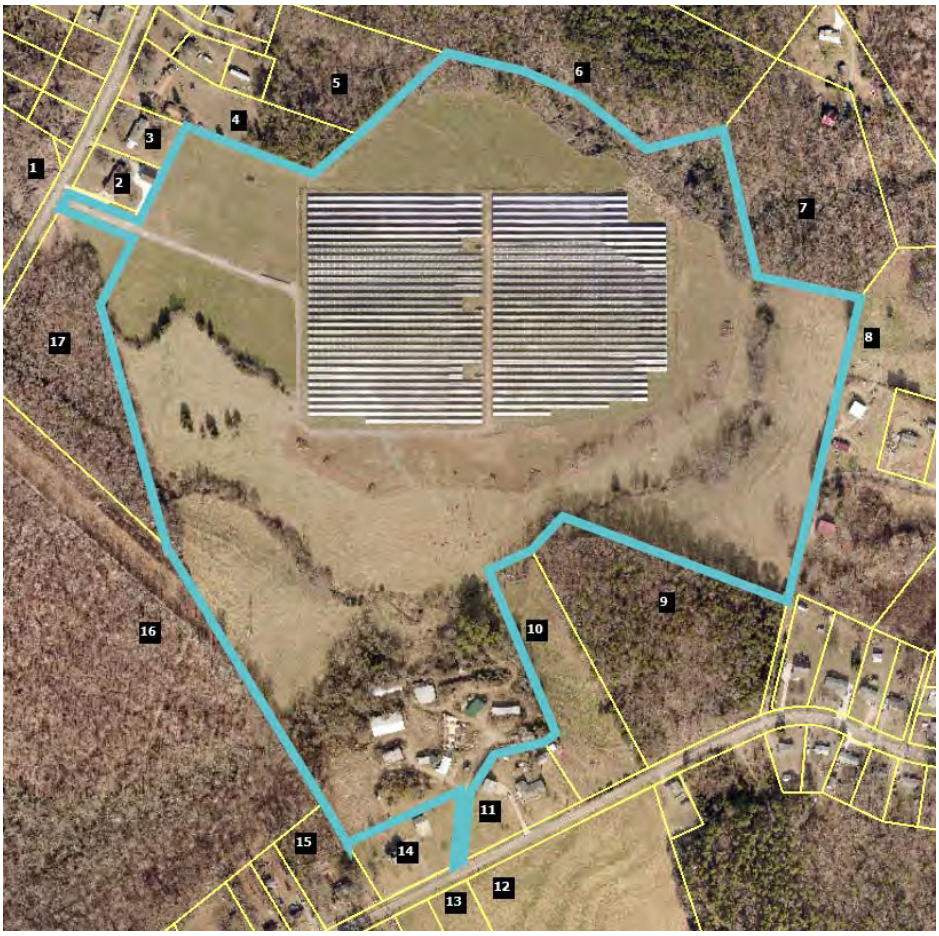
I also looked at the recent sale of 4599 Chanel Court. This home is within 310 feet of solar panels but notably does not have a good landscaping screen in place as shown in the photo below. The plantings appear to be less than 3-feet in height and only a narrow, limited screen of existing hardwoods were kept. The photograph is from the listing.

According to Scott David with Better Homes and Gardens Paracle Realty, this property was under contract for $550,000 contingent on the buyer being able to sell their former home. The former home was apparently overpriced and did not sell and the contract stretched out over 2.5 months.

The seller was in a bind as they had a home they were trying to buy contingent on this closing and were about to lose that opportunity. A cash buyer offered them a quick close at $500,000 and the seller accepted that offer in order to not lose the home they were trying to buy. According to Mr. David, the original contracted buyer and the actual cash buyer never considered the solar farm as a negative. In fact Mr. David noted that the actual buyer saw it as a great opportunity to purchase a home where a new subdivision could not be built behind his house. I therefore conclude that this property supports a finding of no impact on adjoining property, even where the landscaping screen still requires time to grow in for a year-round screen.

I also considered a sale/resale analysis on this property. This same home sold on September 15, 2015 for $462,000. Adjusting this upward by 5% per year for the five years between these sales dates suggests a value of $577,500. Comparing that to the $550,000 contract that suggests a 5% downward impact, which is within a typical market variation. Given that the broker noted no negative impact from the solar farm and the analysis above, I conclude this sale supports a finding of no impact on value.

9. Matched Pair – Mariposa Solar, Gaston County, NC



This project is a 5 MW facility located on 35.80 acres out of a parent tract of 87.61 acres at 517 Blacksnake Road, Stanley that was built in 2016.

I have considered a number of recent sales around this facility as shown below.

The first is identified in the map above as Parcel 1, which is 215 Mariposa Road. This is an older dwelling on large acreage with only one bathroom. I've compared it to similar nearby homes as shown below. The landscaping buffer for this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style
Adjoins	215 Mariposa	17.74	12/12/2017	$249,000	1958	1,551	$160.54	3/1	Garage	Br/Rnch
Not	249 Mariposa	0.48	3/1/2019	$153,000	1974	1,792	$85.38	4/2	Garage	Br/Rnch
Not	110 Airport	0.83	5/10/2016	$166,000	1962	2,165	$76.67	3/2	Crprt	Br/Rnch
Not	1249 Blacksnake	5.01	9/20/2018	$242,500	1980	2,156	$112.48	3/2	Drive	1.5
Not	1201 Abernathy	27.00	5/3/2018	$390,000	1970	2,190	$178.08	3/2	Crprt	Br/Rnch

Adjoining Residential Sales After Solar Farm Approved **Adjoining Sales Adjusted**

Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	215 Mariposa	17.74	12/12/2017	$249,000								$249,000	
Not	249 Mariposa	0.48	3/1/2019	$153,000	-$5,583	-$17,136	$129,450	-$20,576	-$10,000			$229,154	8%
Not	110 Airport	0.83	5/10/2016	$166,000	$7,927	-$4,648	$126,825	-$47,078	-$10,000			$239,026	4%
Not	1249 Blacksnake	5.01	9/20/2018	$242,500	-$5,621	-$37,345	$95,475	-$68,048	-$10,000	$5,000		$221,961	11%
Not	1201 Abernathy	27.00	5/3/2018	$390,000	-$4,552	-$32,760	-$69,450	-$60,705	-$10,000			$212,533	15%
												Average	9%

The average difference after adjusting for all factors is +9% on average, which suggests an enhancement due to the solar farm across the street. Given the large adjustments for acreage and size, I will focus on the low end of the adjusted range at 4%, which is within the typical deviation and therefore suggests no impact on value.

I have also considered Parcel 4 that sold after the solar farm was approved but before it had been constructed in 2016. The landscaping buffer for this parcel is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	242 Mariposa	2.91	9/21/2015	$180,000	1962	1,880	$95.74	3/2	Carport	Br/Rnch	Det Wrkshop
Not	249 Mariposa	0.48	3/1/2019	$153,000	1974	1,792	$85.38	4/2	Garage	Br/Rnch	
Not	110 Airport	0.83	5/10/2016	$166,000	1962	2,165	$76.67	3/2	Crprt	Br/Rnch	
Not	1249 Blacksnake	5.01	9/20/2018	$242,500	1980	2,156	$112.48	3/2	Drive	1.5	

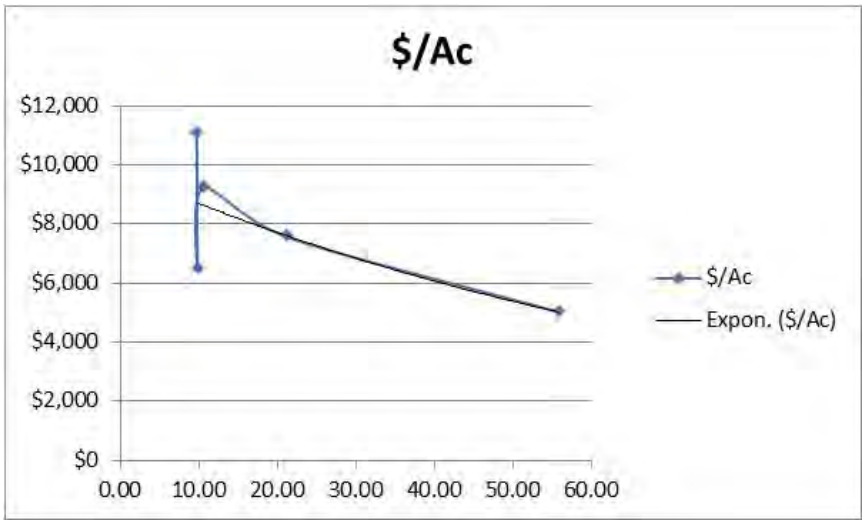
Adjoining Residential Sales After Solar Farm Approved **Adjoining Sales Adjusted**

Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	242 Mariposa	2.91	9/21/2015	$180,000								$180,000	
Not	249 Mariposa	0.48	3/1/2019	$153,000	-$15,807	-$12,852	$18,468	$7,513		-$3,000	$25,000	$172,322	4%
Not	110 Airport	0.83	5/10/2016	$166,000	-$3,165	$0	$15,808	-$28,600			$25,000	$175,043	3%
Not	1249 Blacksnake	5.01	9/20/2018	$242,500	-$21,825	-$30,555	-$15,960	-$40,942		$2,000	$25,000	$160,218	11%
												Average	6%

The average difference after adjusting for all factors is +6%, which is again suggests a mild increase in value due to the adjoining solar farm use. The median is a 4% adjustment, which is within a standard deviation and suggests no impact on property value.

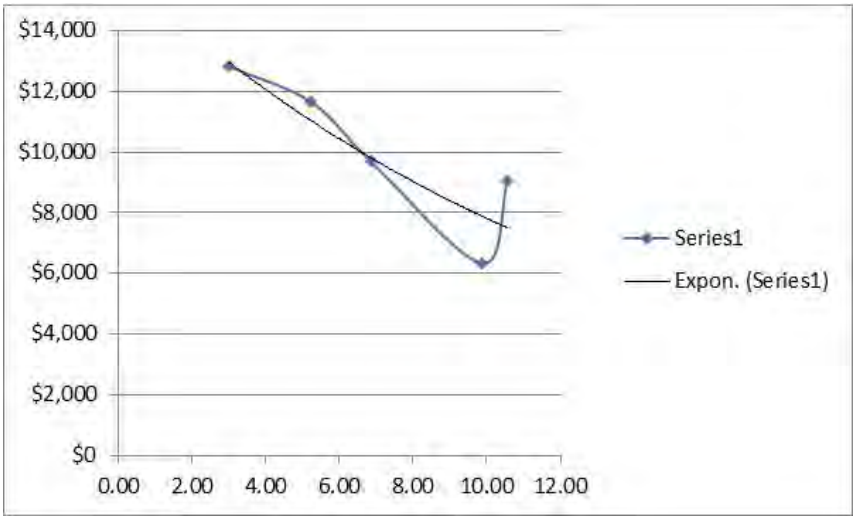
I have also considered the recent sale of Parcel 13 that is located on Blacksnake Road south of the project. I was unable to find good land sales in the same 20-acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 20 acres. As can be seen in the chart below, this lines up exactly with the purchase of the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm.

Adjoining Residential Land Sales After Solar Farm Approved						**Adjoining Sales Adjusted**	
Solar	**Tax/Street**	**Acres**	**Date Sold**	**Sales Price**	**$/Ac**	**Time**	**$/Ac**
Adjoins	174339/Blacksnake	21.15	6/29/2018	$160,000	$7,565		$7,565
Not	227852/Abernathy	10.57	5/9/2018	$97,000	$9,177	$38	$9,215
Not	17443/Legion	9.87	9/7/2018	$64,000	$6,484	-$37	$6,447
Not	164243/Alexis	9.75	2/1/2019	$110,000	$11,282	-$201	$11,081
Not	176884/Bowden	55.77	6/13/2018	$280,000	$5,021	$7	$5,027

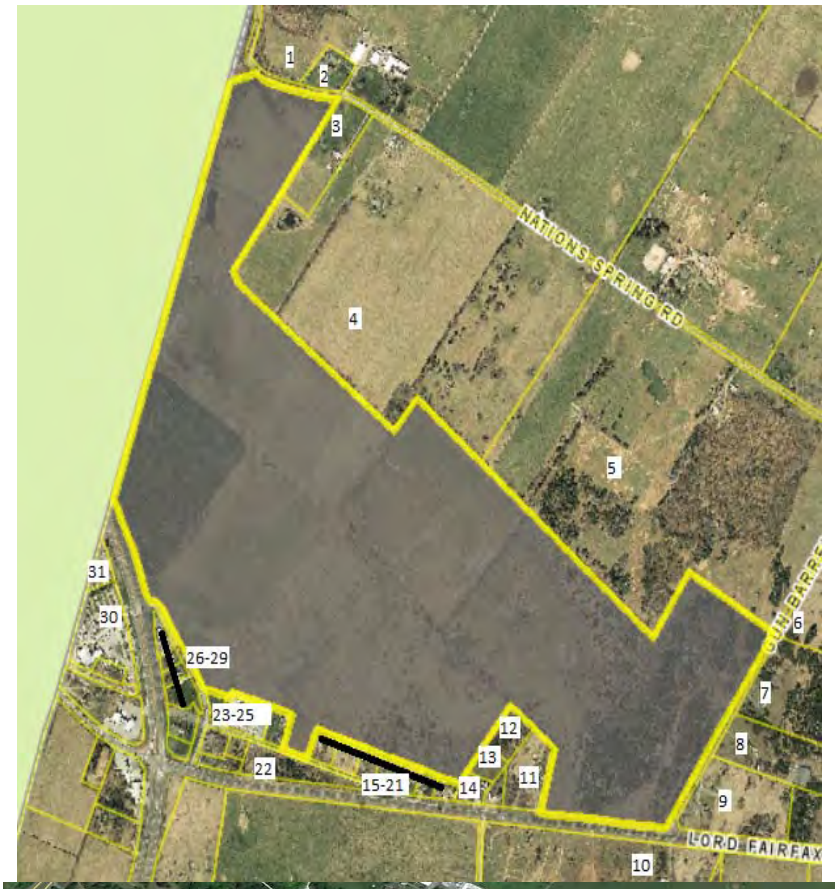


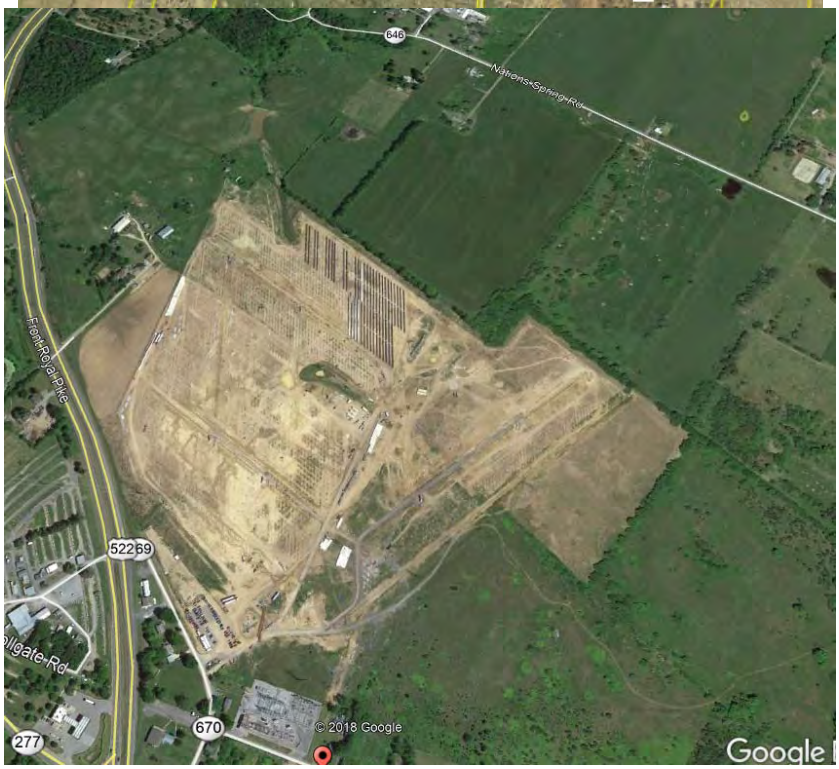
Finally, I have considered the recent sale of Parcel 17 that sold as vacant land. I was unable to find good land sales in the same 7-acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 7 acres. As can be seen in the chart below, this lines up with the trendline running right through the purchase price for the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm. I note that this property was improved with a 3,196 square foot ranch built in 2018 following the land purchase, which shows that development near the solar farm was unimpeded.

Adjoining Residential Land Sales After Solar Farm Approved						**Adjoining Sales Adjusted**		
Solar	**Tax/Street**	**Acres**	**Date Sold**	**Sales Price**	**$/Ac**	**Time**	**Location**	**$/Ac**
Adjoins	227039/Mariposa	6.86	12/6/2017	$66,500	$9,694			$9,694
Not	227852/Abernathy	10.57	5/9/2018	$97,000	$9,177	-$116		$9,061
Not	17443/Legion	9.87	9/7/2018	$64,000	$6,484	-$147		$6,338
Not	177322/Robinson	5.23	5/12/2017	$66,500	$12,715	$217	-$1,272	$11,661
Not	203386/Carousel	2.99	7/13/2018	$43,500	$14,548	-$262	-$1,455	$12,832



10. Matched Pair – Clarke County Solar, Clarke County, VA





This project is a 20 MW facility located on a 234-acre tract that was built in 2017.

I have considered two recent sales of Parcel 3. The home on this parcel is 1,230 feet from the closest panel as measured in the second map from Google Earth, which shows the solar farm under construction. This home sold in January 2017 for $295,000 and again in August 2019 for $385,000. I show each sale below and compare those to similar home sales in each time frame. The significant increase in price between 2017 and 2019 is due to a major kitchen remodel, new roof, and related upgrades as well as improvement in the market in general. The sale and later resale of the home with updates and improvements speaks to pride of ownership and increasing overall value as properties perceived as diminished are less likely to be renovated and sold for profit.

I note that 102 Tilthammer includes a number of barns that I did not attribute any value in the analysis. The market would typically give some value for those barns but even without that adjustment there is an indication of a positive impact on value due to the solar farm. The landscaping buffer from this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	8/18/2019	$385,000	1979	1,392	$276.58	3/2	Det Gar	Ranch	UnBsmt
	Not	167 Leslie	5.00	8/19/2020	$429,000	1980	1,665	$257.66	3/2	Det2Gar	Ranch	
	Not	2393 Old Chapel	2.47	8/10/2020	$330,000	1974	1,500	$220.00	3/1.5	Det Gar	Ranch	
	Not	102 Tilthammer	6.70	5/7/2019	$372,000	1970	1,548	$240.31	3/1.5	Det Gar	Ranch	UnBsmt

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							$385,000			1230
-$13,268		-$2,145	-$56,272		-$5,000	$50,000	$402,315	-4%		
-$9,956	$25,000	$8,250	-$19,008	$5,000		$50,000	$389,286	-1%		
$3,229		$16,740	-$29,991	$5,000			$366,978	5%		
									0%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	1/9/2017	$295,000	1979	1,392	$211.93	3/2	Det Gar	Ranch	UnBsmt
	Not	6801 Middle	2.00	12/12/2017	$249,999	1981	1,584	$157.83	3/2	Open	Ranch	
	Not	4174 Rockland	5.06	1/2/2017	$300,000	1990	1,688	$177.73	3/2	2 Gar	2-story	
	Not	400 Sugar Hill	1.00	6/7/2018	$180,000	1975	1,008	$178.57	3/1	Open	Ranch	

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							$295,000			1230
-$7,100	$25,000	-$2,500	-$24,242		$5,000	$50,000	$296,157	0%		
$177		-$16,500	-$42,085		-$10,000	$50,000	$281,592	5%		
-$7,797		$3,600	$54,857	$10,000	$5,000	$50,000	$295,661	0%		
									1%	

11. Matched Pair – Simon Solar, Social Circle, GA

This 30 MW solar farm is located off Hawkins Academy Road and Social Circle Fairplay Road. I identified three adjoining sales to this tract after development of the solar farm. However, one of those is shown as Parcel 12 in the map above and includes a powerline easement encumbering over a third of the 5 acres and adjoins a large substation as well. It would be difficult to isolate those impacts from any potential solar farm impact and therefore I have excluded that sale. I also excluded the recent sale of Parcel 17, which is a farm with conservation restrictions on it that similarly would require a detailed examination of those conservation restrictions in order to see if there was any impact related to the solar farm. I therefore focused on the recent sale of Parcel 7 and the adjoining parcel to the south of that. They are technically not adjoining due to the access road for the flag-shaped lot to the east. Furthermore, there is an apparent access easement serving the two rear lots that encumber these two parcels which is a further limitation on these sales. This analysis assumes that the access easement does not negatively impact the subject property, though it may.

The landscaping buffer relative to this parcel is considered medium.

Adjoining Land Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	$/AC	Type	Other
7+	Adjoins	4514 Hawkins	36.86	3/31/2016	$180,000	$4,883	Pasture	Esmts
	Not	HD Atha	69.95	12/20/2016	$357,500	$5,111	Wooded	N/A
	Not	Pannell	66.94	11/8/2016	$322,851	$4,823	Mixed	*
	Not	1402 Roy	123.36	9/29/2016	$479,302	$3,885	Mixed	**

* Adjoining 1 acre purchased by same buyer in same deed. Allocation assigned on the County Tax Record.

** Dwelling built in 1996 with a 2016 tax assessed value of $75,800 deducted from sales price to reflect land value

Adjoining Sales Adjusted						Avg
Time	Size	Type	Other	Total/Ac	% Diff	% Diff
				$4,883		
$89	$256			$5,455	-12%	
-$90	$241			$4,974	-2%	
-$60	$389			$4,214	14%	
						0%

The range of impact identified by these matched pairs are -12% to +14%, with an average of 0% impact due to the solar farm. The best matched pair with the least adjustment supports a -2% impact due to the solar farm. I note again that this analysis considers no impact for the existing access easements that meander through this property and it may be having an impact. Still at -2% impact as the best indication for the solar farm, I consider that to be no impact given that market fluctuations support +/- 5%.

12. Matched Pair – Candace Solar, Princeton, NC

This 5 MW solar farm is located at 4839 US 70 Highway just east of Herring Road. This solar farm was completed on October 25, 2016.

I identified three adjoining sales to this tract after development of the solar farm with frontage on US 70. I did not attempt to analyze those sales as they have exposure to an adjacent highway and railroad track. Those homes are therefore problematic for a matched pair analysis unless I have similar homes fronting on a similar corridor.

I did consider a land sale and a home sale on adjoining parcels without those complications.

The lot at 499 Herring Road sold to Paradise Homes of Johnston County of NC, Inc. for $30,000 in May 2017 and a modular home was placed there and sold to Karen and Jason Toole on September 29, 2017. I considered the lot sale first as shown below and then the home sale that followed. The landscaping buffer relative to this parcel is considered medium.

Adjoining Land Sales After Solar Farm Approved							**Adjoining Sales Adjusted**				
Parcel	**Solar**	**Address**	**Acres**	**Date Sold**	**Sales Price**	**Other**	**Time**	**Site**	**Other**	**Total**	**% Diff**
16	Adjoins	499 Herring	2.03	5/1/2017	$30,000					$30,000	
	Not	37 Becky	0.87	7/23/2019	$24,500	Sub/Pwr	-$1,679	$4,900		$27,721	8%
	Not	5858 Bizzell	0.88	8/17/2016	$18,000		$390	$3,600		$21,990	27%
	Not	488 Herring	2.13	12/20/2016	$35,000		$389			$35,389	-18%
										Average	5%

Following the land purchase, the modular home was placed on the site and sold. I have compared this modular home to the following sales to determine if the solar farm had any impact on the purchase price.

Adjoining Residential Sales After Solar Farm Approved

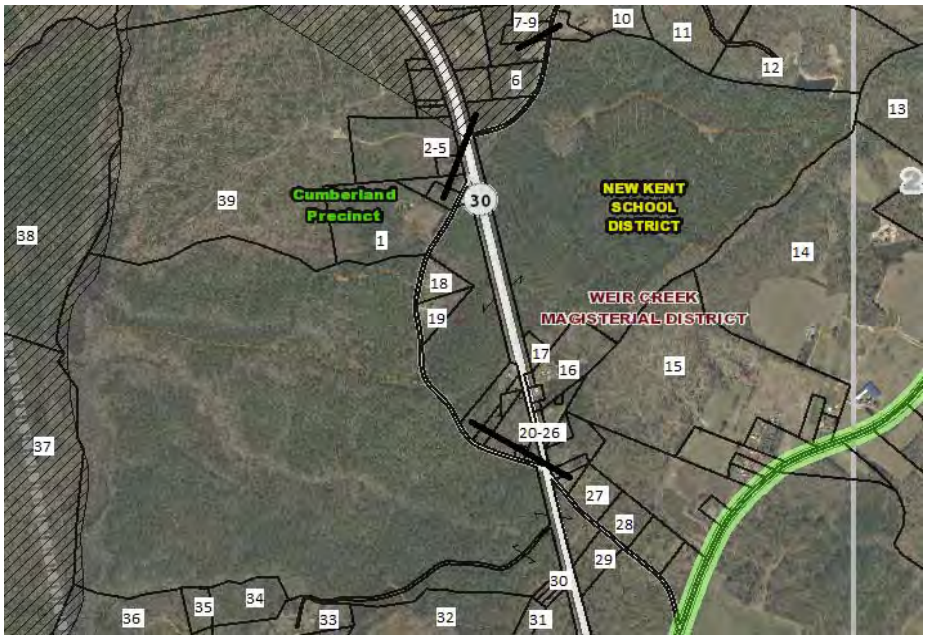
Parcel	**Solar**	**Address**	**Acres**	**Date Sold**	**Sales Price**	**Built**	**GBA**	**$/GBA**	**BR/BA**	**Park**	**Style**	**Other**
16	Adjoins	499 Herring	2.03	9/27/2017	$215,000	2017	2,356	$91.26	4/3	Drive	Modular	
	Not	678 WC	6.32	3/8/2019	$226,000	1995	1,848	$122.29	3/2.5	Det Gar	Mobile	Ag bldgs
	Not	1810 Bay V	8.70	3/26/2018	$170,000	2003	2,356	$72.16	3/2	Drive	Mobile	Ag bldgs
	Not	1795 Bay V	1.78	12/1/2017	$194,000	2017	1,982	$97.88	4/3	Drive	Modular	

Adjoining Residential Sales Af			**Adjoining Sales Adjusted**									**Avg**	
Parcel	**Solar**	**Address**	**Time**	**Site**	**YB**	**GLA**	**BR/BA**	**Park**	**Other**	**Total**	**% Diff**	**% Diff**	**Distance**
16	Adjoins	499 Herring								$215,000			488
	Not	678 WC	-$10,037	-$25,000	$24,860	$37,275	-$5,000	-$7,500	-$20,000	$220,599	-3%		
	Not	1810 Bay V	-$2,579	-$20,000	$11,900	$0				$159,321	26%		
	Not	1795 Bay V	-$1,063		$0	$21,964				$214,902	0%		
												8%	

The best comparable is 1795 Bay Valley as it required the least adjustment and was therefore most similar, which shows a 0% impact. This signifies no impact related to the solar farm.

The range of impact identified by these matched pairs ranges are therefore -3% to +26% with an average of +8% for the home and an average of +4% for the lot, though the best indicator for the lot shows a $5,000 difference in the lot value due to the proximity to the solar farm or a -12% impact.

13. Matched Pair – Walker-Correctional Solar, Barham Road, Barhamsville, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

I considered the recent sale identified on the map above as Parcel 19, which is directly across the street and based on the map shown on the following page is 250 feet from the closest panel. A

limited buffering remains along the road with natural growth being encouraged, but currently the panels are visible from the road. Alex Uminski, SRA with MGMiller Valuations in Richmond VA confirmed this sale with the buying and selling broker. The selling broker indicated that the solar farm was not a negative influence on this sale and in fact the buyer noticed the solar farm and then discovered the listing. The privacy being afforded by the solar farm was considered a benefit by the buyer. I used a matched pair analysis with a similar sale nearby as shown below and found no negative impact on the sales price. Property actually closed for more than the asking price. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	5241 Barham	2.65	10/18/2018	$264,000	2007	1,660	$159.04	3/2	Drive	Ranch	Modular
Not	17950 New Kent	5.00	9/5/2018	$290,000	1987	1,756	$165.15	3/2.5	3 Gar	Ranch	
Not	9252 Ordinary	4.00	6/13/2019	$277,000	2001	1,610	$172.05	3/2	1.5-Gar	Ranch	
Not	2416 W Miller	1.04	9/24/2018	$299,000	1999	1,864	$160.41	3/2.5	Gar	Ranch	

Adjoining Sales Adjusted

Solar	Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
Adjoins	5241 Barham								$264,000		250
Not	17950 New Kent		-$8,000	$29,000	-$4,756	-$5,000	-$20,000	-$15,000	$266,244	-1%	
Not	9252 Ordinary	-$8,310	-$8,000	$8,310	$2,581		-$10,000	-$15,000	$246,581	7%	
Not	2416 W Miller		$8,000	$11,960	-$9,817	-$5,000	-$10,000	-$15,000	$279,143	-6%	
								Average Diff		0%	

I also spoke with Patrick W. McCrerey of Virginia Estates who was marketing a property that sold at 5300 Barham Road adjoining the Walker-Correctional Solar Farm. He indicated that this property was unique with a home built in 1882 and heavily renovated and updated on 16.02 acres. The solar farm was through the woods and couldn't be seen by this property and it had no impact on marketing this property. This home sold on April 26, 2017 for $358,000. I did not set up any matched pairs for this property since it is a unique property that any such comparison would be difficult to rely on. The broker's comments do support the assertion that the adjoining solar farm had no impact on value. The home in this case was 510 feet from the closest panel.

14. Matched Pair – Innovative Solar 46, Roslin Farm Rd, Hope Mills, NC

This project was built in 2016 and located on 532 acres for a 78.5 MW solar farm with the closest home at 125 feet from the closest solar panel with an average distance of 423 feet.

I considered the recent sale of a home on Roslin Farm Road just north of Running Fox Road as shown below. This sale supports an indication of no impact on property value. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	6849 Roslin Farm	1.00	2/18/2019	$155,000	1967	1,610	$96.27	3/3	Drive	Ranch	Brick	435
Not	6592 Sim Canady	2.43	9/5/2017	$185,000	1974	2,195	$84.28	3/2	Gar	Ranch	Brick	
Not	1614 Joe Hall	1.63	9/3/2019	$145,000	1974	1,674	$86.62	3/2	Det Gar	Ranch	Brick	
Not	109 Bledsoe	0.68	1/17/2019	$150,000	1973	1,663	$90.20	3/2	Gar	Ranch	Brick	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	6849 Roslin Farm								$155,000		5%
Not	6592 Sim Canady	$8,278		-$6,475	-$39,444	$10,000	-$5,000		$152,359	2%	
Not	1614 Joe Hall	-$2,407		-$5,075	-$3,881	$10,000	-$2,500		$141,137	9%	
Not	109 Bledsoe	$404	$10,000	-$4,500	-$3,346		-$5,000		$147,558	5%	

15. Matched Pair – Innovative Solar 42, County Line Rd, Fayetteville, NC

This project was built in 2017 and located on 413.99 acres for a 71 MW with the closest home at 135 feet from the closest solar panel with an average distance of 375 feet.

I considered the recent sales identified on the map above as Parcels 2 and 3, which is directly across the street these homes are 330 and 340 feet away. Parcel 2 includes an older home built in 1976, while Parcel 3 is a new home built in 2019. So the presence of the solar farm had no impact on new construction in the area.

The matched pairs for each of these are shown below. The landscaping buffer relative to these parcels is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2923 County Ln	8.98	2/28/2019	$385,000	1976	2,905	$132.53	3/3	2-Car	Ranch	Brick/Pond	340
Not	1928 Shaw Mill	17.00	7/3/2019	$290,000	1977	3,001	$96.63	4/4	2-Car	Ranch	Brick/Pond/Rental	
Not	2109 John McM.	7.78	4/25/2018	$320,000	1978	2,474	$129.35	3/2	Det Gar	Ranch	Vinyl/Pool,Stable	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2923 County Ln								$385,000		3%
Not	1928 Shaw Mill	-$3,055	$100,000	-$1,450	-$7,422	-$10,000			$368,074	4%	
Not	2109 John McM.	$8,333		-$3,200	$39,023	$10,000		$5,000	$379,156	2%	

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2935 County Ln	1.19	6/18/2019	$266,000	2019	2,401	$110.79	4/3	Gar	2-Story		330
Not	3005 Hemingway	1.17	5/16/2019	$269,000	2018	2,601	$103.42	4/3	Gar	2-Story		
Not	7031 Glynn Mill	0.60	5/8/2018	$255,000	2017	2,423	$105.24	4/3	Gar	2-Story		
Not	5213 Bree Brdg	0.92	5/7/2019	$260,000	2018	2,400	$108.33	4/3	3-Gar	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2935 County Ln								$266,000		3%
Not	3005 Hemingway	$748		$1,345	-$16,547				$254,546	4%	
Not	7031 Glynn Mill	$8,724		$2,550	-$1,852				$264,422	1%	
Not	5213 Bree Brdg	$920		$1,300	$76			-$10,000	$252,296	5%	

Both of these matched pairs adjust to an average of +3% on impact for the adjoining solar farm, meaning there is a slight positive impact due to proximity to the solar farm. This is within the standard +/- of typical real estate transactions, which strongly suggests no impact on property value. I noted specifically that for 2923 County Line Road, the best comparable is 2109 John McMillan as it does not have the additional rental unit on it. I made no adjustment to the other sale for the value of that rental unit, which would have pushed the impact on that comparable downward – meaning there would have been a more significant positive impact.

16. Matched Pair – Sunfish Farm, Keenebec Rd, Willow Spring, NC

This project was built in 2015 and located on 49.6 acres (with an inset 11.25-acre parcel) for a 6.4 MW project with the closest home at 135 feet with an average distance of 105 feet.

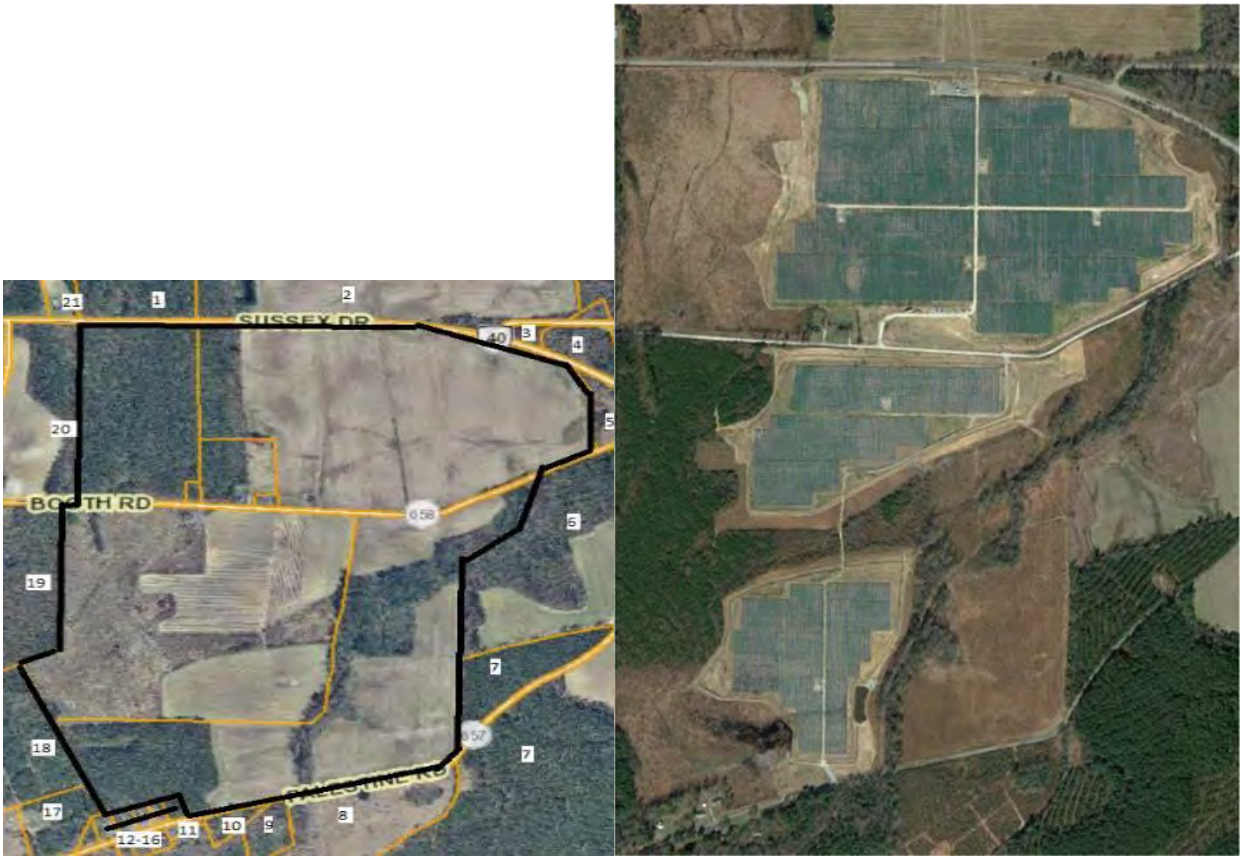
I considered the 2017 sale identified on the map above, which is 205 feet away from the closest panel. The matched pairs for each of these are shown below followed by a more recent map showing the panels at this site. The average difference in the three comparables and the subject property is +3% after adjusting for differences in the sales date, year built, gross living area, and other minor differences. This data is supported by the comments from the broker Brian Schroepfer with Keller Williams that the solar farm had no impact on the purchase price. The landscaping screen is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style
	Adjoins	7513 Glen Willow	0.79	9/1/2017	$185,000	1989	1,492	$123.99	3/2	Gar	BR/Rnch
	Not	2968 Tram	0.69	7/17/2017	$155,000	1984	1,323	$117.16	3/2	Drive	BR/Rnch
	Not	205 Pine Burr	0.97	12/29/2017	$191,000	1991	1,593	$119.90	3/2.5	Drive	BR/Rnch
	Not	1217 Old Honeycutt	1.00	12/15/2017	$176,000	1978	1,558	$112.97	3/2.5	2Carprt	VY/Rnch

Adjustments											Avg
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff
Adjoins	7513 Glen Willow								$185,000		
Not	2968 Tram	$601		$3,875	$15,840		$10,000		$185,316	0%	
Not	205 Pine Burr	-$1,915		-$1,910	-$9,688	-$5,000			$172,487	7%	
Not	1217 Old Honeycutt	-$1,557		$9,680	-$5,965	-$5,000		$5,280	$178,438	4%	
											3%

17. Matched Pair – Sappony Solar, Sussex County, VA



This project is a 30 MW facility located on a 322.68-acre tract that was built in the fourth quarter of 2017.

I have considered the 2018 sale of Parcel 17 as shown below. This was a 1,900 s.f. manufactured home on a 6.00-acre lot that sold in 2018. I have compared that to three other nearby manufactured homes as shown below. The range of impacts is within typical market variation with an average of -1%, which supports a conclusion of no impact on property value. The landscaping buffer is considered medium.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
	Adjoins	12511 Palestine	6.00	7/31/2018	$128,400	2013	1,900	$67.58	4/2.5	Open	Manuf	
	Not	15698 Concord	3.92	7/31/2018	$150,000	2010	2,310	$64.94	4/2	Open	Manuf	Fence
	Not	23209 Sussex	1.03	7/7/2020	$95,000	2005	1,675	$56.72	3/2	Det Crpt	Manuf	
	Not	6494 Rocky Br	4.07	11/8/2018	$100,000	2004	1,405	$71.17	3/2	Open	Manuf	

Adjoining Sales Adjusted									Avg	
Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
							$128,400			1425
$0		$2,250	-$21,299	$5,000			$135,951	-6%		
-$5,660	$13,000	$3,800	$10,209	$5,000	$1,500		$122,849	4%		
-$843		$4,500	$28,185				$131,842	-3%		
									-1%	

18. Matched Pair – Camden Dam, Camden, NC

This 5 MW project was built in 2019 and located on a portion of 49.83 acres.

Parcel 1 noted above along with the home on the adjoining parcel to the north of that parcel sold in late 2018 after this solar farm was approved but prior to construction being completed in 2019. I have considered this sale as shown below. The landscaping screen is considered light.

The comparable at 548 Trotman is the most similar and required the least adjustment shows no impact on property value. The other two comparables were adjusted consistently with one showing significant enhancement and another as showing a mild negative. The best indication is the one requiring the least adjustment. The other two sales required significant site adjustments which make them less reliable. The best comparable and the average of these comparables support a finding of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Adjoins	122 N Mill Dam	12.19	11/29/2018	$350,000	2005	2,334	$149.96	3/3.5	3-Gar	Ranch	
Not	548 Trotman	12.10	5/31/2018	$309,000	2007	1,960	$157.65	4/2	Det2G	Ranch	Wrkshp
Not	198 Sand Hills	2.00	12/22/2017	$235,000	2007	2,324	$101.12	4/3	Open	Ranch	
Not	140 Sleepy Hlw	2.05	8/12/2019	$330,000	2010	2,643	$124.86	4/3	1-Gar	1.5 Story	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
122 N Mill Dam								$350,000			342
548 Trotman	$6,163		-$3,090	$35,377	$5,000			$352,450	-1%		
198 Sand Hills	$8,808	$45,000	-$2,350	$607		$30,000		$317,064	9%		
140 Sleepy Hlw	-$9,258	$45,000	-$8,250	-$23,149	$5,000	$30,000		$369,343	-6%		
										1%	

19. Matched Pair – Grandy Solar, Grandy, NC

This 20 MW project was built in 2019 and located on a portion of 121 acres.

Parcels 40 and 50 have sold since construction began on this solar farm. I have considered both in matched pair analysis below. I note that the marketing for Parcel 40 (120 Par Four) identified the lack of homes behind the house as a feature in the listing. The marketing for Parcel 50 (269 Grandy) identified the property as "very private." Landscaping for both of these parcels is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Adjoins	120 Par Four	0.92	8/17/2019	$315,000	2006	2,188	$143.97	4/3	2-Gar	1.5 Story	Pool
Not	102 Teague	0.69	1/5/2020	$300,000	2005	2,177	$137.80	3/2	Det 3G	Ranch	
Not	112 Meadow Lk	0.92	2/28/2019	$265,000	1992	2,301	$115.17	3/2	Gar	1.5 Story	
Not	116 Barefoot	0.78	9/29/2020	$290,000	2004	2,192	$132.30	4/3	2-Gar	2 Story	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
120 Par Four								$315,000			405
102 Teague	-$4,636		$1,500	$910	$10,000		$20,000	$327,774	-4%		
112 Meadow Lk	$4,937		$18,550	-$7,808	$10,000	$10,000	$20,000	$320,679	-2%		
116 Barefoot	-$12,998		$2,900	-$318			$20,000	$299,584	5%		
										0%	

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
Adjoins	269 Grandy	0.78	5/7/2019	$275,000	2019	1,535	$179.15	3/2.5	2-Gar	Ranch	
Not	307 Grandy	1.04	10/8/2018	$240,000	2002	1,634	$146.88	3/2	Gar	1.5 Story	
Not	103 Branch	0.95	4/22/2020	$230,000	2000	1,532	$150.13	4/2	2-Gar	1.5 Story	
Not	103 Spring Lf	1.07	8/14/2018	$270,000	2002	1,635	$165.14	3/2	2-Gar	Ranch	Pool

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
269 Grandy								$275,000			477
307 Grandy	$5,550		$20,400	-$8,725	$5,000	$10,000		$272,225	1%		
103 Branch	-$8,847		$21,850	$270				$243,273	12%		
103 Spring Lf	$7,871		$22,950	-$9,908	$5,000		-$20,000	$275,912	0%		
										4%	

Both of these matched pairs support a finding of no impact on value. This is reinforced by the listings for both properties identifying the privacy due to no housing in the rear of the property as part of the marketing for these homes.

20. Matched Pair – Champion Solar, Lexington County, SC

This project is a 10 MW facility located on a 366.04-acre tract that was built in 2017.

I have considered the 2020 sale of an adjoining home located off 517 Old Charleston Road. Landscaping is considered light.

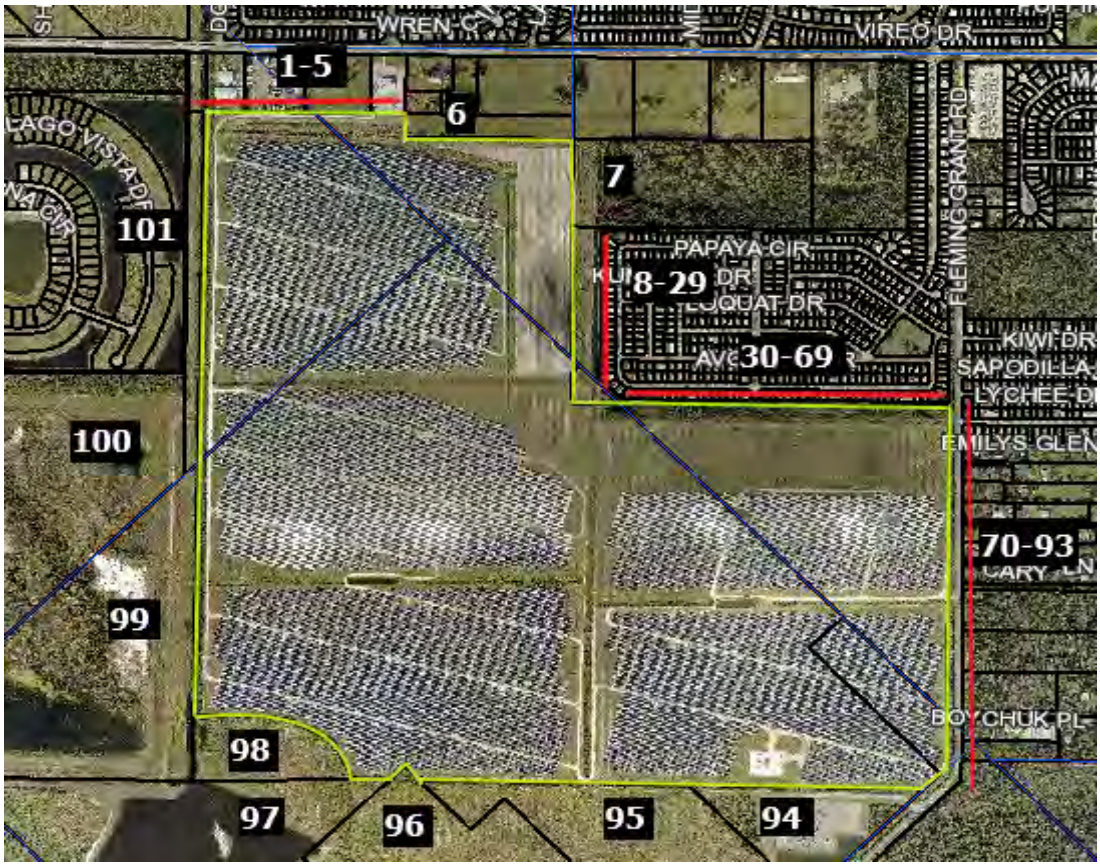
Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	517 Old Charleston	11.05	8/25/2020	$110,000	1962	925	$118.92	3/1	Crport	Br Rnch	
Not	133 Buena Vista	2.65	6/21/2020	$115,000	1979	1,104	$104.17	2/2	Crport	Br Rnch	
Not	214 Crystal Spr	2.13	6/10/2019	$102,500	1970	1,025	$100.00	3/2	Crport	Rnch	
Not	1429 Laurel	2.10	2/21/2019	$126,000	1960	1,250	$100.80	2/1.5	Open	Br Rnch	3 Gar/Brn

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
517 Old Charleston								$110,000			505
133 Buena Vista	$410	$17,000	-$9,775	-$14,917	-$10,000			$97,718	11%		
214 Crystal Spr	$2,482	$18,000	-$4,100	-$8,000	-$10,000		$10,000	$110,882	-1%		
1429 Laurel	$3,804	$18,000	$1,260	-$26,208	-$5,000	$5,000	-$15,000	$107,856	2%		
										4%	

21. Matched Pair – Barefoot Bay Solar Farm, Barefoot Bay, FL



This project is located on 504 acres for a 704.5 MW facility. Most of the adjoining uses are medium density residential with some lower density agricultural uses to the southwest. This project was built in 2018. There is a new subdivision under development to the west.

I have considered a number of recent home sales from the Barefoot Bay Golf Course in the Barefoot Bay Recreation District. There are a number of sales of these mobile/manufactured homes along the eastern boundary and the lower northern boundary. I have compared those home sales to other similar homes in the same community but without the exposure to the solar farm. Staying within the same community keeps location and amenity impacts consistent. I did avoid any comparison with home sales with golf course or lakefront views as that would introduce another variable.

The six manufactured/double wide homes shown below were each compared to three similar homes in the same community and are consistently showing no impact on the adjoining property values. Based on the photos from the listings, there is limited but some visibility of the solar farm to the east, but the canal and landscaping between are providing a good visual buffer and actually are commanding a premium over the non-canal homes.

Landscaping for these adjoining homes is considered light, though photographs from the listings show that those homes on Papaya that adjoin the solar farm from east/west have no visibility of the solar farm and is effectively medium density due to the height differential. The homes that adjoin the solar farm from north/south along Papaya have some filtered view of the solar farm through the trees.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
14	Adjoins	465 Papaya Cr	0.12	7/21/2019	$155,000	1993	1,104	$140.40	2/2	Drive	Manuf	Canal
	Not	1108 Navajo	0.14	2/27/2019	$129,000	1984	1,220	$105.74	2/2	Crprt	Manuf	Canal
	Not	1007 Barefoot	0.11	9/3/2020	$168,000	2005	1,052	$159.70	2/2	Crprt	Manuf	Canal
	Not	1132 Waterway	0.11	7/10/2020	$129,000	1982	1,012	$127.47	2/2	Crprt	Manuf	Canal

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
465 Papaya Cr							$155,000			765
1108 Navajo	$1,565	$5,805	-$9,812				$126,558	18%		
1007 Barefoot	-$5,804	-$10,080	$6,643				$158,759	-2%		
1132 Waterway	-$3,859	$7,095	$9,382				$141,618	9%		
									8%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
19	Adjoins	455 Papaya	0.12	9/1/2020	$183,500	2005	1,620	$113.27	3/2	Crprt	Manuf	Canal
	Not	938 Waterway	0.11	2/12/2020	$160,000	1986	1,705	$93.84	2/2	Crprt	Manuf	Canal
	Not	719 Barefoot	0.12	4/14/2020	$150,000	1996	1,635	$91.74	3/2	Crprt	Manuf	Canal
	Not	904 Fir	0.17	9/27/2020	$192,500	2010	1,626	$118.39	3/2	Crprt	Manuf	Canal

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
455 Papaya							$183,500			750
938 Waterway	$2,724	$15,200	-$6,381				$171,542	7%		
719 Barefoot	$1,770	$6,750	-$1,101				$157,419	14%		
904 Fir	-$422	-$4,813	-$568				$186,697	-2%		
									6%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
37	Adjoins	419 Papaya	0.09	7/16/2019	$127,500	1986	1,303	$97.85	2/2	Crprt	Manuf	Green
	Not	865 Tamarind	0.12	2/4/2019	$133,900	1995	1,368	$97.88	2/2	Crprt	Manuf	Green
	Not	501 Papaya	0.10	6/15/2018	$109,000	1986	1,234	$88.33	2/2	Crprt	Manuf	
	Not	418 Papaya	0.09	8/28/2019	$110,000	1987	1,248	$88.14	2/2	Crprt	Manuf	

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
419 Papaya							$127,500			690
865 Tamarind	$1,828	-$6,026	-$5,090				$124,613	2%		
501 Papaya	$3,637	$0	$4,876			$5,000	$122,513	4%		
418 Papaya	-$399	-$550	$3,878			$5,000	$117,930	8%		
									5%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
39	Adjoins	413 Papaya	0.09	7/16/2020	$130,000	2001	918	$141.61	2/2	Crprt	Manuf	Grn/Upd
	Not	341 Loquat	0.09	2/3/2020	$118,000	1985	989	$119.31	2/2	Crprt	Manuf	Full Upd
	Not	1119 Pocatella	0.19	1/5/2021	$120,000	1993	999	$120.12	2/2	Crprt	Manuf	Green
	Not	1367 Barefoot	0.10	1/12/2021	$130,500	1987	902	$144.68	2/2	Crprt	Manuf	Green/Upd

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
413 Papaya							$130,000			690
341 Loquat	$1,631	$9,440	-$6,777				$122,294	6%		
1119 Pocatella	-$1,749	$4,800	-$7,784			$5,000	$120,267	7%		
1367 Barefoot	-$1,979	$9,135	$1,852				$139,507	-7%		
									2%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
48	Adjoins	343 Papaya	0.09	12/17/2019	$145,000	1986	1,508	$96.15	3/2	Crprt	Manuf	Gn/Fc/Upd
	Not	865 Tamarind	0.12	2/4/2019	$133,900	1995	1,368	$97.88	2/2	Crprt	Manuf	Green
	Not	515 Papaya	0.09	3/22/2018	$145,000	2005	1,376	$105.38	3/2	Crprt	Manuf	Green
	Not	849 Tamarind	0.15	6/26/2019	$155,000	1997	1,716	$90.33	3/2	Crprt	Manuf	Grn/Fnce

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
343 Papaya							$145,000			690
865 Tamarind	$3,566	-$6,026	$10,963				$142,403	2%		
515 Papaya	$7,759	-$13,775	$11,128				$150,112	-4%		
849 Tamarind	$2,273	-$8,525	-$15,030			$5,000	$138,717	4%		
									1%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
52	Nearby	335 Papaya	0.09	4/17/2018	$110,000	1987	1,180	$93.22	2/2	Crprt	Manuf	Green
	Not	865 Tamarind	0.12	2/4/2019	$133,900	1995	1,368	$97.88	2/2	Crprt	Manuf	Green
	Not	501 Papaya	0.10	6/15/2018	$109,000	1986	1,234	$88.33	2/2	Crprt	Manuf	
	Not	604 Puffin	0.09	10/23/2018	$110,000	1988	1,320	$83.33	2/2	Crprt	Manuf	

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
335 Papaya							$110,000			710
865 Tamarind	-$3,306	-$5,356	-$14,721			$0	$110,517	0%		
501 Papaya	-$542	$545	-$3,816			$5,000	$110,187	0%		
604 Puffin	-$1,752	-$550	-$9,333			$5,000	$103,365	6%		
									2%	

I also identified a new subdivision being developed just to the west of this solar farm called The Lakes at Sebastian Preserve. These are all canal-lot homes that are being built with homes starting at $271,000 based on the website and closed sales showing up to $342,000. According to Monique, the onsite broker with Holiday Builders, the solar farm is difficult to see from the lots that back up to that area and she does not anticipate any difficulty in selling those future homes or lots or any impact on the sales price. The closest home that will be built in this development will be approximately 340 feet from the nearest panel.

Based on the closed home prices in Barefoot Bay as well as the broker comments and activity at The Lakes at Sebastian Preserve, the data around this solar farm strongly indicates no negative impact on property value.

22. Matched Pair – Miami-Dade Solar Farm, Miami, FL

This project is located on 346.80 acres for a 74.5 MW facility. All of the adjoining uses are agricultural and residential. This project was built in 2019.

I considered the recent sale of Parcel 26 to the south that sold for over $1.6 million dollars. This home is located on 4.2 acres with additional value in the palm trees according to the listing. The comparables include similar homes nearby that are all actually on larger lots and several include avocado or palm tree income as well. All of the comparables are in similar proximity to the subject and all have similar proximity to the Miami-Dade Executive airport that is located 2.5 miles to the east.

These sales are showing no impact on the value of the property from the adjoining solar farm. The landscaping is considered light.

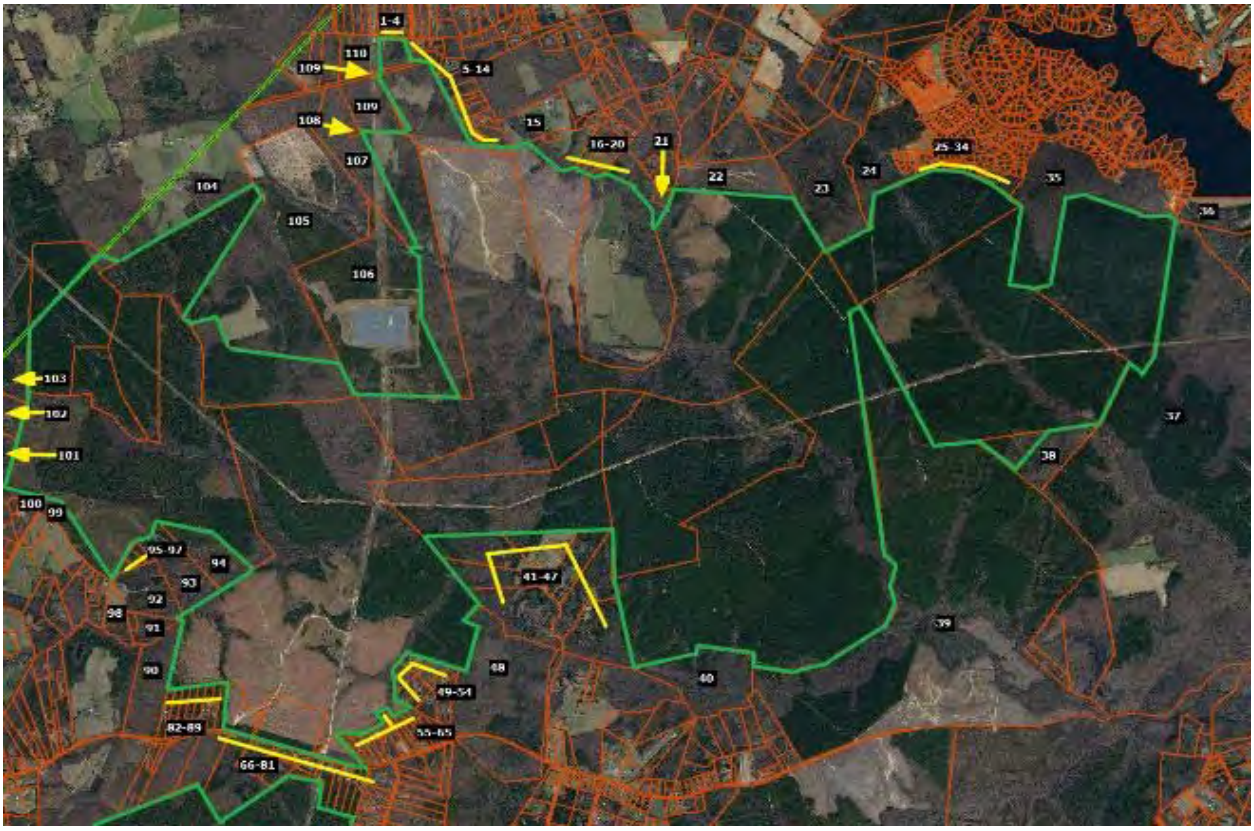
Adjoining Residential Sales After Solar Farm Approved

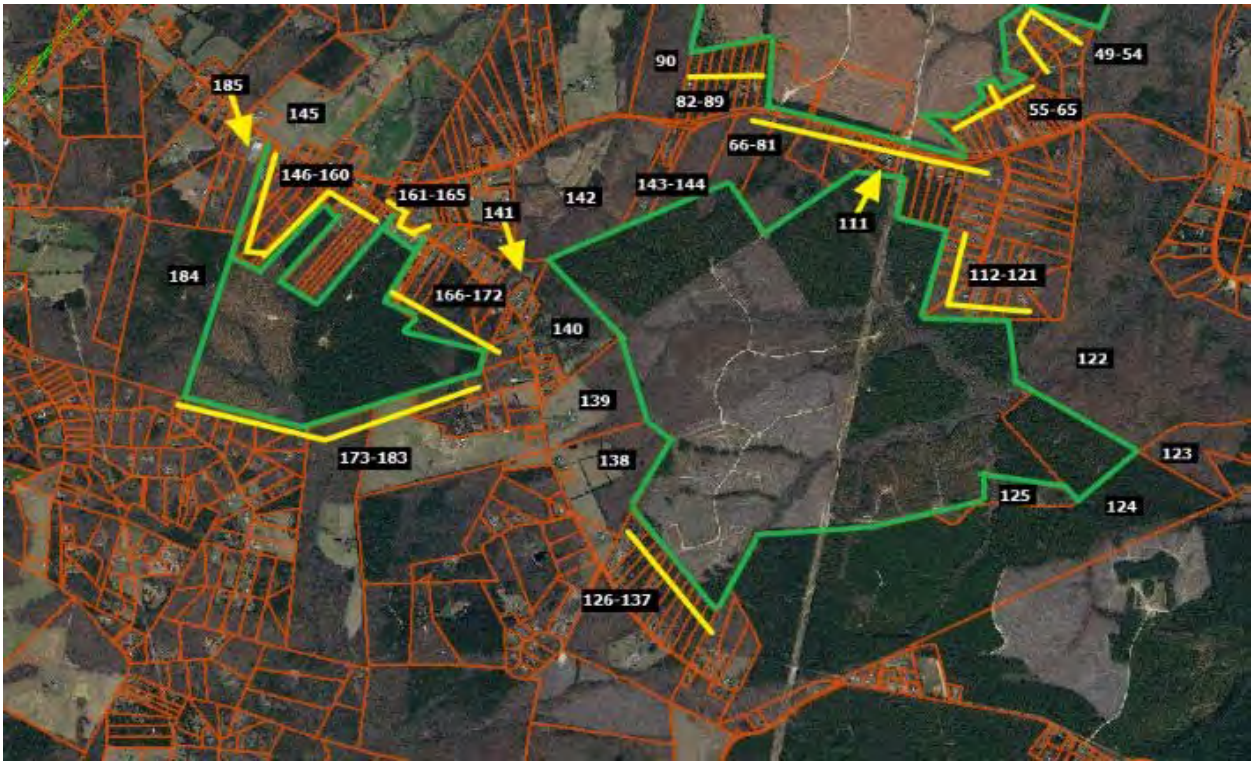
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GLA	BR/BA	Park	Style	Other
26	Adjoins	13600 SW 182nd	4.20	11/5/2020	$1,684,000	2008	6,427	$262.02	5/5.5	3 Gar	CBS Rnch	Pl/Guest
	Not	18090 SW 158th	5.73	10/8/2020	$1,050,000	1997	3,792	$276.90	5/4	3 Gar	CBS Rnch	
	Not	14311 SW 187th	4.70	10/22/2020	$1,100,000	2005	3,821	$287.88	6/5	3 Gar	CBS Rnch	Pool
	Not	17950 SW 158th	6.21	10/22/2020	$1,730,000	2000	6,917	$250.11	6/5.5	2 Gar	CBS Rnch	Pool

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
13600 SW 182nd								$1,684,000			1390
18090 SW 158th	$2,478		$57,750	$583,703	$30,000			$1,723,930	-2%		
14311 SW 187th	$1,298		$16,500	$600,178	$10,000			$1,727,976	-3%		
17950 SW 158th	$2,041		$69,200	-$98,043		$10,000		$1,713,199	-2%		
										-2%	

23. Matched Pair – Spotsylvania Solar, Paytes, VA





This solar farm is being built in four phases with the area known as Site C having completed construction in November 2020 after the entire project was approved in April 2019. Site C, also known as Pleinmont 1 Solar, includes 99.6 MW located in the southeast corner of the project and shown on the maps above with adjoining parcels 111 through 144. The entire Spotsylvania project totals 617 MW on 3500 acres out of a parent tract assemblage of 6,412 acres.

I have identified three adjoining home sales that occurred during construction and development of the site in 2020.

The first is located on the north side of Site A on Orange Plank Road. The second is located on Nottoway Lane just north of Caparthin Road on the south side of Site A and east of Site C. The third is located on Post Oak Road for a home that backs up to Site C that sold in September 2020 near the completion of construction for Site C.

Spotsylvania Solar Farm

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	12901 Orng Plnk	5.20	8/27/2020	$319,900	1984	1,714	$186.64	3/2	Drive	1.5	Un Bsmt
Not	8353 Gold Dale	3.00	1/27/2021	$415,000	2004	2,064	$201.07	3/2	3 Gar	Ranch	
Not	6488 Southfork	7.26	9/9/2020	$375,000	2017	1,680	$223.21	3/2	2 Gar	1.5	Barn/Patio
Not	12717 Flintlock	0.47	12/2/2020	$290,000	1990	1,592	$182.16	3/2.5	Det Gar	Ranch	

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
12901 Orng Plnk								$319,900		1270
8353 Gold Dale	-$5,219	$20,000	-$41,500	-$56,298		-$20,000		$311,983	2%	
6488 Southfork	-$401	-$20,000	-$61,875	$6,071		-$15,000		$283,796	11%	
12717 Flintlock	-$2,312	$40,000	-$8,700	$17,779	-$5,000	-$5,000		$326,767	-2%	
							Average Diff		4%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	9641 Nottoway	11.00	5/12/2020	$449,900	2004	3,186	$141.21	4/2.5	Garage	2-Story	Un Bsmt
Not	26123 Lafayette	1.00	8/3/2020	$390,000	2006	3,142	$124.12	3/3.5	Gar/DtG	2-Story	
Not	11626 Forest	5.00	8/10/2020	$489,900	2017	3,350	$146.24	4/3.5	2 Gar	2-Story	
Not	10304 Pny Brnch	6.00	7/27/2020	$485,000	1998	3,076	$157.67	4/4	2Gar/Dt2	Ranch	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
9641 Nottoway								$449,900		1950
26123 Lafayette	-$2,661	$45,000	-$3,900	$4,369	-$10,000	-$5,000		$417,809	7%	
11626 Forest	-$3,624		-$31,844	-$19,187		-$5,000		$430,246	4%	
10304 Pny Brnch	-$3,030		$14,550	$13,875	-$15,000	-$15,000	-$10,000	$470,396	-5%	
							Average Diff		2%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	$/GBA	BR/BA	Park	Style	Other
Adjoins	13353 Post Oak	5.20	9/21/2020	$300,000	1992	2,400	$125.00	4/3	Drive	2-Story	Fn Bsmt
Not	9609 Logan Hgt	5.86	7/4/2019	$330,000	2004	2,352	$140.31	3/2	2Gar	2-Story	
Not	12810 Catharpian	6.18	1/30/2020	$280,000	2008	2,240	$125.00	4/2.5	Drive	2-Story	Bsmt/Nd Pnt
Not	10725 Rbrt Lee	5.01	10/26/2020	$295,000	1995	2,166	$136.20	4/3	Gar	2-Story	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
13353 Post Oak								$300,000		1171
9609 Logan Hgt	$12,070		-$19,800	$5,388		-$15,000	$15,000	$327,658	-9%	
12810 Catharpian	$5,408		-$22,400	$16,000	$5,000		$15,000	$299,008	0%	
10725 Rbrt Lee	-$849		-$4,425	$25,496		-$10,000		$305,222	-2%	
							Average Diff		-4%	

All three of these homes are well set back from the solar panels at distances over 1,000 feet and are well screened from the project. All three show no indication of any impact on property value.

Conclusion – SouthEast Over 5 MW

Southeast USA Over 5 MW
Matched Pair Summary

							Adj. Uses By Acreage				1 mile Radius (2010-2020 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Pop.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	AM Best	Goldsboro	NC	38	5.00	2	38%	0%	23%	39%	1,523	$37,358	$148,375	Light
2	Mulberry	Selmer	TN	160	5.00	60	13%	73%	10%	3%	467	$40,936	$171,746	Lt to Med
3	Leonard	Hughesville	MD	47	5.00	20	18%	75%	0%	6%	525	$106,550	$350,000	Light
4	Gastonia SC	Gastonia	NC	35	5.00	48	33%	0%	23%	44%	4,689	$35,057	$126,562	Light
5	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	$79,114	$281,731	Light
6	Tracy	Bailey	NC	50	5.00	10	29%	0%	71%	0%	312	$43,940	$99,219	Heavy
7	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	$75,000	$291,667	Heavy
8	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	$63,678	$256,306	Lt to Med
9	Mariposa	Stanley	NC	36	5.00	96	48%	0%	52%	0%	1,716	$36,439	$137,884	Light
10	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	$81,022	$374,453	Light
11	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	$76,155	$269,922	Medium
12	Candace	Princeton	NC	54	5.00	22	76%	24%	0%	0%	448	$51,002	$107,171	Medium
13	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	$80,773	$320,076	Light
14	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	$58,688	$183,435	Light
15	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	$60,037	$276,347	Light
16	Sunfish	Willow Spring	NC	50	6.40	30	35%	35%	30%	0%	1,515	$63,652	$253,138	Light
17	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	$51,410	$155,208	Light
18	Camden Dam	Camden	NC	50	5.00	0	17%	72%	11%	0%	403	$84,426	$230,288	Light
19	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	$50,355	$231,408	Light
20	Champion	Pelion	SC	100	10.00	N/A	4%	70%	8%	18%	1,336	$46,867	$171,939	Light
21	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	$36,737	$143,320	Lt to Med
22	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	$90,909	$403,571	Light
23	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	$120,861	$483,333	Md to Hvy
	Average			485	57.04	38	24%	48%	22%	6%	923	$63,955	$237,700	
	Median			234	20.00	20	17%	59%	11%	0%	467	$60,037	$231,408	
	High			3,500	617.00	160	76%	98%	94%	44%	4,689	$120,861	$483,333	
	Low			35	5.00	0	1%	0%	0%	0%	48	$35,057	$99,219	

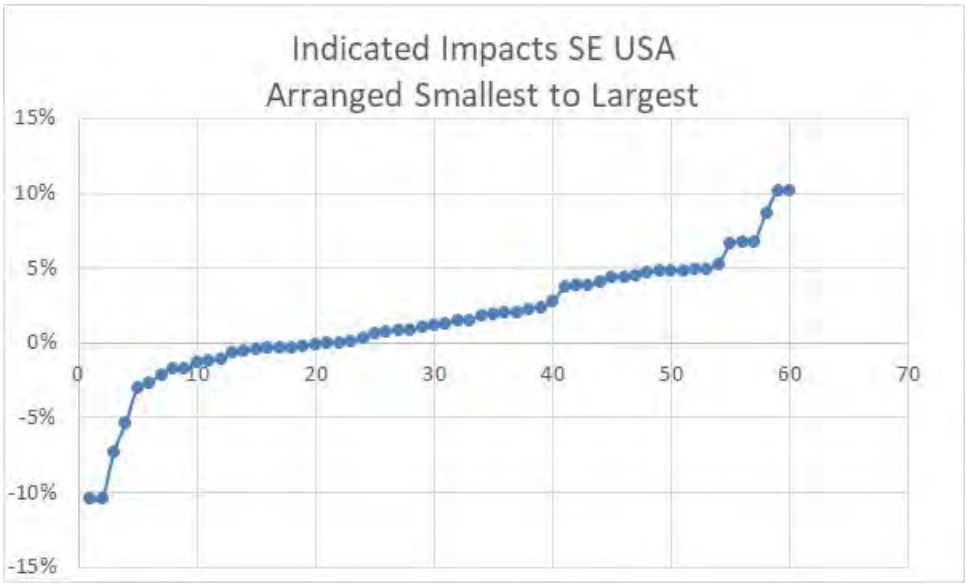
The solar farm matched pairs shown above have similar characteristics to each other in terms of population, but with several outliers showing solar farms in farm more urban areas. The median income for the population within 1 mile of a solar farm is $60,037 with a median housing unit value of $231,408. Most of the comparables are under $300,000 in the home price, with $483,333 being the high end of the set, though I have matched pairs in multiple states over $1,000,000 adjoining solar farms. The adjoining uses show that residential and agricultural uses are the predominant adjoining uses. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Virginia and adjoining states as well as the proposed subject property.

Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property.

I have pulled 56 matched pairs from the above referenced solar farms to provide the following summary of home sale matched pairs and land sales next to solar farms. The summary shows that the range of differences is from -10% to +10% with an average of +1% and median of +1%. This means that the average and median impact is for a slight positive impact due to adjacency to a solar farm. However, this +1 to rate is within the typical variability I would expect from real estate. I therefore conclude that this data shows no negative or positive impact due to adjacency to a solar farm.

While the range is seemingly wide, the graph below clearly shows that the vast majority of the data falls between -5% and +5% and most of those are clearly in the 0 to +5% range. This data strongly supports an indication of no impact on adjoining residential uses to a solar farm.

I therefore conclude that these matched pairs support a finding of no impact on value at the subject property for the proposed project, which as proposed will include a landscaped buffer to screen adjoining residential properties.


Indicated Impacts SE USA
Arranged Smallest to Largest
15%
10%
5%
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-5%
-10%
-15%
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10
20
30
40
50
60
70

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	MW	Approx Distance	Tax ID/Address	Date	Sale Price	Adj. Sale Price	% Diff	Veg. Buffer
1	AM Best	Goldsboro	NC	5	280	3600195570	Sep-13	$250,000			Light
						3600198928	Mar-14	$250,000	$250,000	0%	
2	AM Best	Goldsboro	NC	5	280	3600195361	Sep-13	$260,000			Light
						3600194813	Apr-14	$258,000	$258,000	1%	
3	AM Best	Goldsboro	NC	5	280	3600199891	Jul-14	$250,000			Light
						3600198928	Mar-14	$250,000	$250,000	0%	
4	AM Best	Goldsboro	NC	5	280	3600198632	Aug-14	$253,000			Light
						3600193710	Oct-13	$248,000	$248,000	2%	
5	AM Best	Goldsboro	NC	5	280	3600196656	Dec-13	$255,000			Light
						3601105180	Dec-13	$253,000	$253,000	1%	
6	AM Best	Goldsboro	NC	5	280	3600182511	Feb-13	$247,000			Light
						3600183905	Dec-12	$240,000	$245,000	1%	
7	AM Best	Goldsboro	NC	5	280	3600182784	Apr-13	$245,000			Light
						3600193710	Oct-13	$248,000	$248,000	-1%	
8	AM Best	Goldsboro	NC	5	280	3600195361	Nov-15	$267,500			Light
						3600195361	Sep-13	$260,000	$267,800	0%	
9	Mulberry	Selmer	TN	5	400	0900A011	Jul-14	$130,000			Light
						099CA043	Feb-15	$148,900	$136,988	-5%	
10	Mulberry	Selmer	TN	5	400	099CA002	Jul-15	$130,000			Light
						0990NA040	Mar-15	$120,000	$121,200	7%	
11	Mulberry	Selmer	TN	5	480	491 Dusty	Oct-16	$176,000			Light
						35 April	Aug-16	$185,000	$178,283	-1%	
12	Mulberry	Selmer	TN	5	650	297 Country	Sep-16	$150,000			Medium
						53 Glen	Mar-17	$126,000	$144,460	4%	
13	Mulberry	Selmer	TN	5	685	57 Cooper	Feb-19	$163,000			Medium
						191 Amelia	Aug-18	$132,000	$155,947	4%	
14	Leonard Rd	Hughesville	MD	5.5	230	14595 Box Elder	Feb-16	$291,000			Light
						15313 Bassford Rd	Jul-16	$329,800	$292,760	-1%	
15	Neal Hawkins	Gastonia	NC	5	225	609 Neal Hawkins	Mar-17	$270,000			Light
						1418 N Modena	Apr-18	$225,000	$242,520	10%	
16	Summit	Moyock	NC	80	1,060	129 Pinto	Apr-16	$170,000			Light
						102 Timber	Apr-16	$175,500	$175,101	-3%	
17	Summit	Moyock	NC	80	980	105 Pinto	Dec-16	$206,000			Light
						127 Ranchland	Jun-15	$219,900	$198,120	4%	
18	Tracy	Bailey	NC	5	780	9162 Winters	Jan-17	$255,000			Heavy
						7352 Red Fox	Jun-16	$176,000	$252,399	1%	
19	Manatee	Parrish	FL	75	1180	13670 Highland	Aug-18	$255,000			Heavy
						13851 Highland	Sep-18	$240,000	$255,825	0%	
20	McBride Place	Midland	NC	75	275	4380 Joyner	Nov-17	$325,000			Medium
						3870 Elkwood	Aug-16	$250,000	$317,523	2%	
21	McBride Place	Midland	NC	75	505	5811 Kristi	Mar-20	$530,000			Medium
						3915 Tania	Dec-19	$495,000	$504,657	5%	
22	Mariposa	Stanley	NC	5	1155	215 Mariposa	Dec-17	$249,000			Light
						110 Airport	May-16	$166,000	$239,026	4%	
23	Mariposa	Stanley	NC	5	570	242 Mariposa	Sep-15	$180,000			Light
						110 Airport	Apr-16	$166,000	$175,043	3%	
24	Clarke Cnty	White Post	VA	20	1230	833 Nations Spr	Jan-17	$295,000			Light
						6801 Middle	Dec-17	$249,999	$296,157	0%	
25	Candace	Princeton	NC	5	488	499 Herring	Sep-17	$215,000			Medium
						1795 Bay Valley	Dec-17	$194,000	$214,902	0%	
26	Walker	Barhamsville	VA	20	250	5241 Barham	Oct-18	$264,000			Light
						9252 Ordinary	Jun-19	$277,000	$246,581	7%	
27	AM Best	Goldsboro	NC	5	385	103 Granville Pl	Jul-18	$265,000			Light
						2219 Granville	Jan-18	$260,000	$265,682	0%	
28	AM Best	Goldsboro	NC	5	315	104 Erin	Jun-17	$280,000			Light
						2219 Granville	Jan-18	$265,000	$274,390	2%	
29	AM Best	Goldsboro	NC	5	400	2312 Granville	May-18	$284,900			Light
						2219 Granville	Jan-18	$265,000	$273,948	4%	

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	MW	Approx Distance	Tax ID/Address	Date	Sale Price	Adj. Sale Price	% Diff	Veg. Buffer
30	AM Best	Goldsboro	NC	5	400	2310 Granville	May-19	$280,000			Light
						634 Friendly	Jul-19	$267,000	$265,291	5%	
31	Summit	Moyock	NC	80	570	318 Green View	Sep-19	$357,000			Light
						336 Green View	Jan-19	$365,000	$340,286	5%	
32	Summit	Moyock	NC	80	440	164 Ranchland	Apr-19	$169,000			Light
						105 Longhorn	Oct-17	$184,500	$186,616	-10%	
33	Summit	Moyock	NC	80	635	358 Oxford	Sep-19	$478,000			Light
						176 Providence	Sep-19	$425,000	$456,623	4%	
34	Summit	Moyock	NC	80	970	343 Oxford	Mar-17	$490,000			Light
						218 Oxford	Apr-17	$525,000	$484,064	1%	
35	Innov 46	Hope Mills	NC	78.5	435	6849 Roslin Farm	Feb-19	$155,000			Light
						109 Bledsoe	Jan-19	$150,000	$147,558	5%	
36	Innov 42	Fayetteville	NC	71	340	2923 County Line	Feb-19	$385,000			Light
						2109 John McMillan	Apr-18	$320,000	$379,156	2%	
37	Innov 42	Fayetteville	NC	71	330	2935 County Line	Jun-19	$266,000			Light
						7031 Glynn Mill	May-18	$255,000	$264,422	1%	
38	Sunfish	Willow Sprng	NC	6.4	205	7513 Glen Willow	Sep-17	$185,000			Light
						205 Pine Burr	Dec-17	$191,000	$172,487	7%	
39	Neal Hawkins	Gastonia	NC	5	145	611 Neal Hawkins	Jun-17	$288,000			Light
						1211 Still Forrest	Jul-18	$280,000	$274,319	5%	
40	Clarke Cnty	White Post	VA	20	1230	833 Nations Spr	Aug-19	$385,000			Light
						2393 Old Chapel	Aug-20	$330,000	$389,286	-1%	
41	Sappony	Stony Creek	VA	20	1425	12511 Palestine	Jul-18	$128,400			Medium
						6494 Rocky Branch	Nov-18	$100,000	$131,842	-3%	
42	Camden Dam	Camden	NC	5	342	122 N Mill Dam	Nov-18	$350,000			Light
						548 Trotman	May-18	$309,000	$352,450	-1%	
43	Grandy	Grandy	NC	20	405	120 Par Four	Aug-19	$315,000			Light
						116 Barefoot	Sep-20	$290,000	$299,584	5%	
44	Grandy	Grandy	NC	20	477	269 Grandy	May-19	$275,000			Light
						103 Spring Leaf	Aug-18	$270,000	$275,912	0%	
45	Champion	Pelion	SC	10	505	517 Old Charleston	Aug-20	$110,000			Light
						1429 Laurel	Feb-19	$126,000	$107,856	2%	
46	Barefoot Bay	Barefoot Bay	FL	74.5	765	465 Papaya	Jul-19	$155,000			Medium
						1132 Waterway	Jul-20	$129,000	$141,618	9%	
47	Barefoot Bay	Barefoot Bay	FL	74.5	750	455 Papaya	Sep-20	$183,500			Medium
						904 Fir	Sep-20	$192,500	$186,697	-2%	
48	Barefoot Bay	Barefoot Bay	FL	74.5	690	419 Papaya	Jul-19	$127,500			Medium
						865 Tamarind	Feb-19	$133,900	$124,613	2%	
49	Barefoot Bay	Barefoot Bay	FL	74.5	690	413 Papaya	Jul-20	$130,000			Medium
						1367 Barefoot	Jan-21	$130,500	$139,507	-7%	
50	Barefoot Bay	Barefoot Bay	FL	74.5	690	343 Papaya	Dec-19	$145,000			Light
						865 Tamarind	Feb-19	$133,900	$142,403	2%	
51	Barefoot Bay	Barefoot Bay	FL	74.5	710	335 Papaya	Apr-18	$110,000			Light
						865 Tamarind	Feb-19	$133,900	$110,517	0%	
52	Miami-Dade	Miami	FL	74.5	1390	13600 SW 182nd	Nov-20	$1,684,000			Light
						17950 SW 158th	Oct-20	$1,730,000	$1,713,199	-2%	
53	Spotsylvania	Paytes	VA	617	1270	12901 Orange Plnk	Aug-20	$319,900			Medium
						12717 Flintlock	Dec-20	$290,000	$326,767	-2%	
54	Spotsylvania	Paytes	VA	617	1950	9641 Nottoway	May-20	$449,900			Medium
						11626 Forest	Aug-20	$489,900	$430,246	4%	
55	Spotsylvania	Paytes	VA	617	1171	13353 Post Oak	Sep-20	$300,000			Heavy
						12810 Catharpin	Jan-20	$280,000	$299,008	0%	
56	McBride Place	Midland	NC	75	470	5833 Kristi	Sep-20	$625,000			Light
						4055 Dakeita	Dec-20	$600,000	$594,303	5%	

MW	Avg. Distance
64.91	612
20.00	479
617.00	1,950
5.00	145

	Indicated Impact
Average	1%
Median	1%
High	10%
Low	-10%

I have further broken down these results based on the MWs, Landscaping, and distance from panel to show the following range of findings for these different categories.

Most of the findings are for homes between 201 and 500 feet. Most of the findings are for Light landscaping screens.

Light landscaping screens are showing no impact on value at any distances, including for solar farms over 75.1 MW.

MW Range 4.4 to 10									
Landscaping	**Light**	**Light**	**Light**	**Medium**	**Medium**	**Medium**	**Heavy**	**Heavy**	**Heavy**
Distance	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**
#	1	19	2	0	1	2	0	0	1
Average	5%	2%	3%	N/A	0%	4%	N/A	N/A	1%
Median	5%	1%	3%	N/A	0%	4%	N/A	N/A	1%
High	5%	10%	4%	N/A	0%	4%	N/A	N/A	1%
Low	5%	-5%	3%	N/A	0%	4%	N/A	N/A	1%

10.1 to 30									
Landscaping	**Light**	**Light**	**Light**	**Medium**	**Medium**	**Medium**	**Heavy**	**Heavy**	**Heavy**
Distance	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**
#	0	3	2	0	0	1	0	0	0
Average	N/A	4%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
Median	N/A	5%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
High	N/A	7%	0%	N/A	N/A	-3%	N/A	N/A	N/A
Low	N/A	0%	-1%	N/A	N/A	-3%	N/A	N/A	N/A

30.1 to 75									
Landscaping	**Light**	**Light**	**Light**	**Medium**	**Medium**	**Medium**	**Heavy**	**Heavy**	**Heavy**
Distance	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**
#	0	2	3	0	0	4	0	0	0
Average	N/A	1%	0%	N/A	N/A	0%	N/A	N/A	N/A
Median	N/A	1%	0%	N/A	N/A	0%	N/A	N/A	N/A
High	N/A	2%	2%	N/A	N/A	9%	N/A	N/A	N/A
Low	N/A	1%	-2%	N/A	N/A	-7%	N/A	N/A	N/A

75.1+									
Landscaping	**Light**	**Light**	**Light**	**Medium**	**Medium**	**Medium**	**Heavy**	**Heavy**	**Heavy**
Distance	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**	**100-200**	**201-500**	**500+**
#	0	2	5	0	0	2	0	0	1
Average	N/A	-3%	2%	N/A	N/A	1%	N/A	N/A	0%
Median	N/A	-3%	4%	N/A	N/A	1%	N/A	N/A	0%
High	N/A	5%	5%	N/A	N/A	4%	N/A	N/A	0%
Low	N/A	-10%	-3%	N/A	N/A	-2%	N/A	N/A	0%

C. Summary of National Data on Solar Farms

I have worked in 19 states related to solar farms and I have been tracking matched pairs in most of those states. On the following pages I provide a brief summary of those findings showing 37 solar farms over 5 MW studied with each one providing matched pair data supporting the findings of this report.

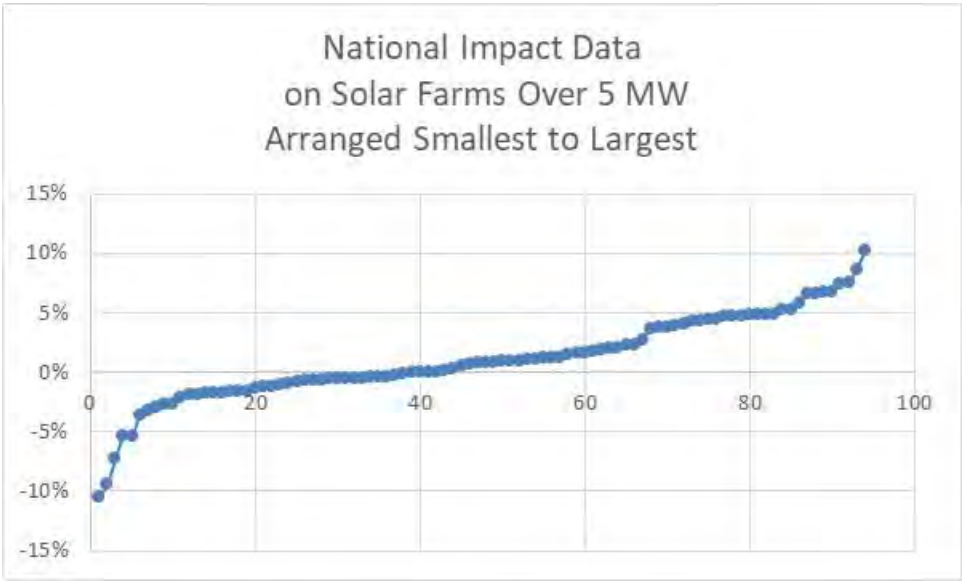
The solar farms summary is shown below with a summary of the matched pair data shown on the following page.

Matched Pair Summary							**Adj. Uses By Acreage**				**1 mile Radius (2010-2020 Data)**			
	Name	**City**	**State**	**Acres**	**MW**	**Topo Shift**	**Res**	**Ag**	**Ag/Res**	**Com/Ind**	**Popl.**	**Med. Income**	**Avg. Housing Unit**	**Veg. Buffer**
1	AM Best	Goldsboro	NC	38	5.00	2	38%	0%	23%	39%	1,523	$37,358	$148,375	Light
2	Mulberry	Selmer	TN	160	5.00	60	13%	73%	10%	3%	467	$40,936	$171,746	Lt to Med
3	Leonard	Hughesville	MD	47	5.00	20	18%	75%	0%	6%	525	$106,550	$350,000	Light
4	Gastonia SC	Gastonia	NC	35	5.00	48	33%	0%	23%	44%	4,689	$35,057	$126,562	Light
5	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	$79,114	$281,731	Light
7	Tracy	Bailey	NC	50	5.00	10	29%	0%	71%	0%	312	$43,940	$99,219	Heavy
8	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	$75,000	$291,667	Heavy
9	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	$63,678	$256,306	Lt to Med
10	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	$70,158	$187,037	Light
11	Dominion	Indianapolis	IN	134	8.60	20	3%	97%	0%	0%	3,774	$61,115	$167,515	Light
12	Mariposa	Stanley	NC	36	5.00	96	48%	0%	52%	0%	1,716	$36,439	$137,884	Light
13	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	$81,022	$374,453	Light
14	Flemington	Flemington	NJ	120	9.36	N/A	13%	50%	28%	8%	3,477	$105,714	$444,696	Lt to Med
15	Frenchtown	Frenchtown	NJ	139	7.90	N/A	37%	35%	29%	0%	457	$111,562	$515,399	Light
16	McGraw	East Windsor	NJ	95	14.00	N/A	27%	44%	0%	29%	7,684	$78,417	$362,428	Light
17	Tinton Falls	Tinton Falls	NJ	100	16.00	N/A	98%	0%	0%	2%	4,667	$92,346	$343,492	Light
18	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	$76,155	$269,922	Medium
19	Candace	Princeton	NC	54	5.00	22	76%	24%	0%	0%	448	$51,002	$107,171	Medium
20	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	$80,773	$320,076	Light
21	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	$58,688	$183,435	Light
22	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	$60,037	$276,347	Light
23	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	$47,208	$187,214	Light
24	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	$46,839	$110,361	Light
25	Sunfish	Willow Spring	NC	50	6.40	30	35%	35%	30%	0%	1,515	$63,652	$253,138	Light
26	Picture Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	$81,081	$280,172	None
27	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	$80,997	$292,308	None
28	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	$51,410	$155,208	Medium
29	Camden Dam	Camden	NC	50	5.00	0	17%	72%	11%	0%	403	$84,426	$230,288	Light
30	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	$50,355	$231,408	Light
31	Champion	Pelion	SC	100	10.00	N/A	4%	70%	8%	18%	1,336	$46,867	$171,939	Light
32	Eddy II	Eddy	TX	93	10.00	N/A	15%	25%	58%	2%	551	$59,627	$139,088	Light
33	Somerset	Somerset	TX	128	10.60	N/A	5%	95%	0%	0%	1,293	$41,574	$135,490	Light
34	DG Amp Piqua	Piqua	OH	86	12.60	2	26%	16%	58%	0%	6,735	$38,919	$96,555	Light
45	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	$36,737	$143,320	Lt to Med
36	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	$90,909	$403,571	Light
37	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	$120,861	$483,333	Med to Hvy
	Average			362	42.05	32	24%	52%	19%	6%	1,515	$66,292	$242,468	
	Median			150	17.80	10	16%	59%	7%	0%	560	$62,384	$230,848	
	High			3,500	617.00	160	98%	98%	94%	44%	7,684	$120,861	$515,399	
	Low			35	5.00	0	1%	0%	0%	0%	48	$35,057	$96,555	

From these 37 solar farms, I have derived 94 matched pairs. The matched pairs show no negative impact at distances as close as 105 feet between a solar panel and the nearest point on a home. The range of impacts is -10% to +10% with an average and median of +1%.

	MW	Avg. Distance		Indicated Impact
Average	44.80	569	**Average**	1%
Median	14.00	400	**Median**	1%
High	617.00	1,950	**High**	10%
Low	5.00	145	**Low**	-10%

While the range is broad, the two charts below show the data points in range from lowest to highest. There is only 3 data points out of 94 that show a negative impact. The rest support either a finding of no impact or 9 of the data points suggest a positive impact due to adjacency to a solar farm. As discussed earlier in this report, I consider this data to strongly support a finding of no impact on value as most of the findings are within typical market variation and even within that, most are mildly positive findings.



D. Larger Solar Farms

I have also considered larger solar farms to address impacts related to larger projects. Projects have been increasing in size and most of the projects between 100 and 1000 MW are newer with little time for adjoining sales. I have included a breakdown of solar farms with 20 MW to 80 MW facilities with one 617 MW facility.

Matched Pair Summary - @20 MW And Larger							Adj. Uses By Acreage				1 mile Radius (2010-2019 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Popl.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	$79,114	$281,731	Light
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	$75,000	$291,667	Heavy
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	$63,678	$256,306	Lt to Med
4	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	$70,158	$187,037	Light
5	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	$81,022	$374,453	Light
6	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	$76,155	$269,922	Medium
7	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	$80,773	$320,076	Light
8	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	$58,688	$183,435	Light
9	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	$60,037	$276,347	Light
10	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	$47,208	$187,214	Light
11	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	$46,839	$110,361	Light
12	Picure Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	$81,081	$280,172	Light
13	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	$80,997	$292,308	None
14	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	$51,410	$155,208	None
15	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	$50,355	$231,408	Medium
16	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	$36,737	$143,320	Lt to Med
17	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	$90,909	$403,571	Light
18	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	$120,861	$483,333	Med to Hvy
	Average			640	76.03		19%	64%	17%	4%	721	$69,501	$262,659	
	Median			335	29.20		12%	68%	2%	0%	293	$72,579	$273,135	
	High			3,500	617.00		75%	98%	94%	25%	2,446	$120,861	$483,333	
	Low			121	19.60		1%	0%	0%	0%	48	$36,737	$110,361	

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

I have included a breakdown of solar farms with 50 MW to 617 MW facilities adjoining.

Matched Pair Summary - @50 MW And Larger							Adj. Uses By Acreage				1 mile Radius (2010-2019 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Popl.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	$79,114	$281,731	Light
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	$75,000	$291,667	Heavy
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	$63,678	$256,306	Lt to Med
4	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	$58,688	$183,435	Light
5	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	$60,037	$276,347	Light
6	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	$36,737	$143,320	Lt to Med
7	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	$90,909	$403,571	Light
8	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	$120,861	$483,333	Med to Hvy
	Average			1,142	143.19		19%	58%	23%	1%	786	$73,128	$289,964	
	Median			580	75.00		15%	67%	0%	0%	390	$69,339	$279,039	
	High			3,500	617.00		41%	97%	94%	3%	2,446	$120,861	$483,333	
	Low			347	71.00		2%	0%	0%	0%	48	$36,737	$143,320	

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

The data for these larger solar farms is shown in the SE USA and the National data breakdowns with similar landscaping, setbacks and range of impacts that fall mostly in the +/-5% range as can be seen earlier in this report.

On the following page I show 81 projects ranging in size from 50 MW up to 1,000 MW with an average size of 111.80 MW and a median of 80 MW. The average closest distance for an adjoining home is 263 feet, while the median distance is 188 feet. The closest distance is 57 feet. The mix of adjoining uses is similar with most of the adjoining uses remaining residential or agricultural in nature. This is the list of solar farms that I have researched for possible matched pairs and not a complete list of larger solar farms in those states.

Parcel #	State	City	Name	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre Res	Agri	Ag/R	Com
78	NC	Moyock	Summit/Ranchland	80	2034		674	360	4%	94%	0%	2%
133	MS	Hattiesburg	Hattiesburg	50	1129	479.6	650	315	35%	65%	0%	0%
179	SC	Ridgeland	Jasper	140	1600	1000	461	108	2%	85%	13%	0%
211	NC	Enfield	Chestnut	75	1428.1		1,429	210	4%	96%	0%	0%
222	VA	Chase City	Grasshopper	80	946.25				6%	87%	5%	1%
226	VA	Louisa	Belcher	88	1238.1			150	19%	53%	28%	0%
305	FL	Dade City	Mountain View	55	347.12		510	175	32%	39%	21%	8%
319	FL	Jasper	Hamilton	74.9	1268.9	537	3,596	240	5%	67%	28%	0%
336	FL	Parrish	Manatee	74.5	1180.4		1,079	625	2%	50%	1%	47%
337	FL	Arcadia	Citrus	74.5	640				0%	0%	100%	0%
338	FL	Port Charlotte	Babcock	74.5	422.61				0%	0%	100%	0%
353	VA	Oak Hall	Amazon East(ern sh	80	1000		645	135	8%	75%	17%	0%
364	VA	Stevensburg	Greenwood	100	2266.6	1800	788	200	8%	62%	29%	0%
368	NC	Warsaw	Warsaw	87.5	585.97	499	526	130	11%	66%	21%	3%
390	NC	Ellerbe	Innovative Solar 34	50	385.24	226	N/A	N/A	1%	99%	0%	0%
399	NC	Midland	McBride	74.9	974.59	627	1,425	140	12%	78%	9%	0%
400	FL	Mulberry	Alafia	51	420.35		490	105	7%	90%	3%	0%
406	VA	Clover	Foxhound	91	1311.8		885	185	5%	61%	17%	18%
410	FL	Trenton	Trenton	74.5	480		2,193	775	0%	26%	55%	19%
411	NC	Battleboro	Fern	100	1235.4	960.71	1,494	220	5%	76%	19%	0%
412	MD	Goldsboro	Cherrywood	202	1722.9	1073.7	429	200	10%	76%	13%	0%
434	NC	Conetoe	Conetoe	80	1389.9	910.6	1,152	120	5%	78%	17%	0%
440	FL	Debary	Debary	74.5	844.63		654	190	3%	27%	0%	70%
441	FL	Hawthorne	Horizon	74.5	684				3%	81%	16%	0%
484	VA	Newsoms	Southampton	100	3243.9		-	-	3%	78%	17%	3%
486	VA	Stuarts Draft	Augusta	125	3197.4	1147	588	165	16%	61%	16%	7%
491	NC	Misenheimer	Misenheimer 2018	80	740.2	687.2	504	130	11%	40%	22%	27%
494	VA	Shacklefords	Walnut	110	1700	1173	641	165	14%	72%	13%	1%
496	VA	Clover	Piney Creek	80	776.18	422	523	195	15%	62%	24%	0%
511	NC	Scotland Neck	American Beech	160	3255.2	1807.8	1,262	205	2%	58%	38%	3%
514	NC	Reidsville	Williamsburg	80	802.6	507	734	200	25%	12%	63%	0%
517	VA	Luray	Cape	100	566.53	461	519	110	42%	12%	46%	0%
518	VA	Emporia	Fountain Creek	80	798.3	595	862	300	6%	23%	71%	0%
525	NC	Plymouth	Macadamia	484	5578.7	4813.5	1,513	275	1%	90%	9%	0%
526	NC	Mooresboro	Broad River	50	759.8	365	419	70	29%	55%	16%	0%
555	FL	Mulberry	Durrance	74.5	463.57	324.65	438	140	3%	97%	0%	0%
560	NC	Yadkinville	Sugar	60	477	357	382	65	19%	39%	20%	22%
561	NC	Enfield	Halifax 80mw 2019	80	1007.6	1007.6	672	190	8%	73%	19%	0%
577	VA	Windsor	Windsor	85	564.1	564.1	572	160	9%	67%	24%	0%
579	VA	Paytes	Spotsylvania	500	6412	3500			9%	52%	11%	27%
582	NC	Salisbury	China Grove	65	428.66	324.26	438	85	58%	4%	38%	0%
583	NC	Walnut Cove	Lick Creek	50	1424	185.11	410	65	20%	64%	11%	5%
584	NC	Enfield	Sweetleaf	94	1956.3	1250	968	160	5%	63%	32%	0%
586	VA	Aylett	Sweet Sue	77	1262	576	1,617	680	7%	68%	25%	0%
593	NC	Windsor	Sumac	120	3360.6	1257.9	876	160	4%	90%	6%	0%
599	TN	Somerville	Yum Yum	147	4000	1500	1,862	330	3%	32%	64%	1%
602	GA	Waynesboro	White Oak	76.5	516.7	516.7	2,995	1,790	1%	34%	65%	0%
603	GA	Butler	Butler GA	103	2395.1	2395.1	1,534	255	2%	73%	23%	2%
604	GA	Butler	White Pine	101.2	505.94	505.94	1,044	100	1%	51%	48%	1%
605	GA	Metter	Live Oak	51	417.84	417.84	910	235	4%	72%	23%	0%
606	GA	Hazelhurst	Hazelhurst II	52.5	947.15	490.42	2,114	105	9%	64%	27%	0%
607	GA	Bainbridge	Decatur Parkway	80	781.5	781.5	1,123	450	2%	27%	22%	49%
608	GA	Leslie-DeSoto	Americus	1000	9661.2	4437	5,210	510	1%	63%	36%	0%
616	FL	Fort White	Fort White	74.5	570.5	457.2	828	220	12%	71%	17%	0%
621	VA	Spring Grove	Loblolly	150	2181.9	1000	1,860	110	7%	62%	31%	0%
622	VA	Scottsville	Woodridge	138	2260.9	1000	1,094	170	9%	63%	28%	0%
625	NC	Middlesex	Phobos	80	754.52	734	356	57	14%	75%	10%	0%
628	MI	Deerfield	Carroll Road	200	1694.8	1694.8	343	190	12%	86%	0%	2%
633	VA	Emporia	Brunswick	150.2	2076.4	1387.3	1,091	240	4%	85%	11%	0%
634	NC	Elkin	Partin	50	429.4	257.64	945	155	30%	25%	15%	30%

Parcel #	State	City	Name	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre Res	Agri	Ag/R	Com
638	GA	Dry Branch	Twiggs	200	2132.7	2132.7	-	-	10%	55%	35%	0%
639	NC	Hope Mills	Innovative Solar 46	78.5	531.87	531.87	423	125	17%	83%	0%	0%
640	NC	Hope Mills	Innovative Solar 42	71	413.99	413.99	375	135	41%	59%	0%	0%
645	NC	Stanley	Hornet	75	1499.5	858.4	663	110	30%	40%	23%	6%
650	NC	Grifton	Grifton 2	56	681.59	297.6	363	235	1%	99%	0%	0%
651	NC	Grifton	Buckleberry	52.1	367.67	361.67	913	180	5%	54%	41%	0%
657	KY	Greensburg	Horseshoe Bend	60	585.65	395	1,394	63	3%	36%	61%	0%
658	KY	Campbellsville	Flat Run	55	429.76	429.76	408	115	13%	52%	35%	0%
666	FL	Archer	Archer	74.9	636.94	636.94	638	200	43%	57%	0%	0%
667	FL	New Smyrna Bea	Pioneer Trail	74.5	1202.8	900	1,162	225	14%	61%	21%	4%
668	FL	Lake City	Sunshine Gateway	74.5	904.29	472	1,233	890	11%	80%	8%	0%
669	FL	Florahome	Coral Farms	74.5	666.54	580	1,614	765	19%	75%	7%	0%
672	VA	Appomattox	Spout Spring	60	881.12	673.37	836	335	16%	30%	46%	8%
676	TX	Stamford	Alamo 7	106.4	1663.1	1050	-	-	6%	83%	0%	11%
677	TX	Fort Stockton	RE Roserock	160	1738.2	1500	-	-	0%	100%	0%	0%
678	TX	Lamesa	Lamesa	102	914.5	655	921	170	4%	41%	11%	44%
679	TX	Lamesa	Ivory	50	706	570	716	460	0%	87%	2%	12%
680	TX	Uvalde	Alamo 5	95	830.35	800	925	740	1%	93%	6%	0%
684	NC	Waco	Brookcliff	50	671.03	671.03	560	150	7%	21%	15%	57%
689	AZ	Arlington	Mesquite	320.8	3774.5	2617	1,670	525	8%	92%	0%	0%
692	AZ	Tucson	Avalon	51	479.21	352	-	-	0%	100%	0%	0%
				81								
			Average	111.80	1422.4	968.4	1031	263	10%	62%	22%	6%
			Median	80.00	914.5	646.0	836	188	7%	64%	17%	0%
			High	1000.00	9661.2	4813.5	5210	1790	58%	100%	100%	70%
			Low	50.00	347.1	185.1	343	57	0%	0%	0%	0%

VII. Distance Between Homes and Panels

I have measured distances at matched pairs as close as 105 feet between panel and home to show no impact on value. This measurement goes from the closest point on the home to the closest solar panel. This is a strong indication that at this distance there is no impact on adjoining homes.

However, in tracking other approved solar farms across Virginia, North Carolina and other states, I have found that it is common for there to be homes within 100 to 150 feet of solar panels. Given the visual barriers in the form of privacy fencing or landscaping, there is no sign of negative impact.

I have also tracked a number of locations where solar panels are between 50 and 100 feet of single-family homes. In these cases the landscaping is typically a double row of more mature evergreens at time of planting. There are many examples of solar farms with one or two homes closer than 100-feet, but most of the adjoining homes are further than that distance.

VIII. Topography

As shown on the summary charts for the solar farms, I have been identifying the topographic shifts across the solar farms considered. Differences in topography can impact visibility of the panels, though typically this results in distant views of panels as opposed to up close views. The topography noted for solar farms showing no impact on adjoining home values range from as much as 160-foot shifts across the project. Given that appearance is the only factor of concern and that distance plus landscape buffering typically addresses up close views, this leaves a number of potentially distant views of panels. I specifically note that in Crittenden in KY there are distant views of panels from the adjoining homes that showed no impact on value.

General rolling terrain with some distant solar panel views are showing no impact on adjoining property value.

IX. Potential Impacts During Construction

Any development of a site will have a certain amount of construction, whether it is for a commercial agricultural use such as large-scale poultry operations or a new residential subdivision. Construction will be temporary and consistent with other development uses of the land and in fact dust from the construction will likely be less than most other construction projects given the minimal grading. I would not anticipate any impacts on property value due to construction on the site.

I note that in the matched pairs that I have included there have been a number of home sales that happened after a solar farm was approved but before the solar farm was built showing no impact on property value. Therefore the anticipated construction had no impact as shown by that data.

X. Scope of Research

I have researched over 750 solar farms and sites on which solar farms are existing and proposed in Virginia, Illinois, Tennessee, North Carolina, Kentucky as well as other states to determine what uses are typically found in proximity with a solar farm. The data I have collected and provide in this report strongly supports the assertion that solar farms are having no negative consequences on adjoining agricultural and residential values.

Beyond these references, I have quantified the adjoining uses for a number of solar farm comparables to derive a breakdown of the adjoining uses for each solar farm. The chart below shows the breakdown of adjoining or abutting uses by total acreage.

Percentage By Adjoining Acreage

	Res	Ag	Res/AG	Comm	Ind	Avg Home	Closest Home	All Res Uses	All Comm Uses
Average	19%	53%	20%	2%	6%	887	344	91%	8%
Median	11%	56%	11%	0%	0%	708	218	100%	0%
High	100%	100%	100%	93%	98%	5,210	4,670	100%	98%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

I have also included a breakdown of each solar farm by number of adjoining parcels to the solar farm rather than based on adjoining acreage. Using both factors provide a more complete picture of the neighboring properties.

Percentage By Number of Parcels Adjoining

	Res	Ag	Res/AG	Comm	Ind	Avg Home	Closest Home	All Res Uses	All Comm Uses
Average	61%	24%	9%	2%	4%	887	344	93%	6%
Median	65%	19%	5%	0%	0%	708	218	100%	0%
High	100%	100%	100%	60%	78%	5,210	4,670	105%	78%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

Both of the above charts show a marked residential and agricultural adjoining use for most solar farms. Every single solar farm considered included an adjoining residential or residential/agricultural use.

XI. Specific Factors Related To Impacts on Value

I have completed a number of Impact Studies related to a variety of uses and I have found that the most common areas for impact on adjoining values typically follow a hierarchy with descending levels of potential impact. I will discuss each of these categories and how they relate to a solar farm.

1. Hazardous material
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

1. Hazardous material

A solar farm presents no potential hazardous waste byproduct as part of normal operation. Any fertilizer, weed control, vehicular traffic, or construction will be significantly less than typically applied in a residential development and even most agricultural uses.

The various solar farms that I have inspected and identified in the addenda have no known environmental impacts associated with the development and operation.

2. Odor

The various solar farms that I have inspected produced no odor.

3. Noise

Whether discussing passive fixed solar panels, or single-axis trackers, there is no negative impact associated with noise from a solar farm. The transformer reportedly has a hum similar to an HVAC that can only be heard in close proximity to this transformer and the buffers on the property are sufficient to make emitted sounds inaudible from the adjoining properties. No sound is emitted from the facility at night.

The various solar farms that I have inspected were inaudible from the roadways.

4. Traffic

The solar farm will have no onsite employee's or staff. The site requires only minimal maintenance. Relative to other potential uses of the site (such as a residential subdivision), the additional traffic generated by a solar farm use on this site is insignificant.

5. Stigma

There is no stigma associated with solar farms and solar farms and people generally respond favorably towards such a use. While an individual may express concerns about proximity to a solar farm, there is no specific stigma associated with a solar farm. Stigma generally refers to things such as adult establishments, prisons, rehabilitation facilities, and so forth.

Solar panels have no associated stigma and in smaller collections are found in yards and roofs in many residential communities. Solar farms are adjoining elementary, middle and high schools as well as churches and subdivisions. I note that one of the solar farms in this report not only adjoins a church, but is actually located on land owned by the church. Solar panels on a roof are often cited as an enhancement to the property in marketing brochures.

I see no basis for an impact from stigma due to a solar farm.

6. Appearance

I note that larger solar farms using fixed or tracking panels are a passive use of the land that is in keeping with a rural/residential area. As shown below, solar farms are comparable to larger greenhouses. This is not surprising given that a greenhouse is essentially another method for collecting passive solar energy. The greenhouse use is well received in residential/rural areas and has a similar visual impact as a solar farm.

The solar panels are all less than 15 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse and lower than a single-story residential dwelling. Were the subject property developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as these proposed panels.

Whenever you consider the impact of a proposed project on viewshed or what the adjoining owners may see from their property it is important to distinguish whether or not they have a protected viewshed or not. Enhancements for scenic vistas are often measured when considering properties that adjoin preserved open space and parks. However, adjoining land with a preferred view today conveys no guarantee that the property will continue in the current use. Any consideration of the impact of the appearance requires a consideration of the wide variety of other uses a property already has the right to be put to, which for solar farms often includes subdivision development, agricultural business buildings such as poultry, or large greenhouses and the like.

Dr. Randall Bell, MAI, PhD, and author of the book **Real Estate Damages**, Third Edition, on Page 146 "Views of bodies of water, city lights, natural settings, parks, golf courses, and other amenities are considered desirable features, particularly for residential properties." Dr. Bell continues on Page 147 that "View amenities may or may not be protected by law or regulation. It is sometimes argued that views have value only if they are protected by a view easement, a zoning ordinance, or covenants, conditions, and restrictions (CC&Rs), although such protections are relatively

uncommon as a practical matter. The market often assigns significant value to desirable views irrespective of whether or not such views are protected by law."

Dr. Bell concludes that a view enhances adjacent property, even if the adjacent property has no legal right to that view. He then discusses a "borrowed" view where a home may enjoy a good view of vacant land or property beyond with a reasonable expectation that the view might be partly or completely obstructed upon development of the adjoining land. He follows that with "This same concept applies to potentially undesirable views of a new development when the development conforms to applicable zoning and other regulations. Arguing value diminution in such cases is difficult, since the possible development of the offending property should have been known." In other words, if there is an allowable development on the site then arguing value diminution with such a development would be difficult. This further extends to developing the site with alternative uses that are less impactful on the view than currently allowed uses.

This gets back to the point that if a property has development rights and could currently be developed in such a way that removes the viewshed such as a residential subdivision, then a less intrusive use such as a solar farm that is easily screened by landscaping would not have a greater impact on the viewshed of any perceived value adjoining properties claim for viewshed. Essentially, if there are more impactful uses currently allowed, then how can you claim damages for a less impactful use.

7. Conclusion

On the basis of the factors described above, it is my professional opinion that the proposed solar farm will not negatively impact adjoining property values. The only category of impact of note is appearance, which is addressed through setbacks and landscaping buffers. The matched pair data supports that conclusion.

XII. Conclusion

The matched pair analysis shows no negative impact in home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all support a finding of no impact on property value.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved adjoining agricultural uses, schools, churches, and residential developments.

I have found no difference in the mix of adjoining uses or proximity to adjoining homes based on the size of a solar farm and I have found no significant difference in the matched pair data adjoining larger solar farms versus smaller solar farms. The data in the Southeast is consistent with the larger set of data that I have nationally, as is the more specific data located in and around Virginia.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no negative impact on the value of adjoining or abutting property. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is no traffic.

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Professional Experience

Kirkland Appraisals, LLC, Raleigh, N.C. — 2003 – Present
Commercial appraiser

Hester & Company, Raleigh, N.C.
Commercial appraiser — 1996 – 2003

Professional Affiliations

MAI (Member, Appraisal Institute) designation #11796 — 2001
NC State Certified General Appraiser # A4359 — 1999
VA State Certified General Appraiser # 4001017291
SC State Certified General Appraiser # 6209
FL State Certified General Appraiser # RZ3950
IL State Certified General Appraiser # 553.002633
KY State Certified General Appraiser # 5522

Education

Bachelor of Arts in English, University of North Carolina, Chapel Hill — 1993

Continuing Education

Florida Appraisal Laws and Regulations	2020
Michigan Appraisal Law	2020
Uniform Standards of Professional Appraisal Practice Update	2020
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book)	2019
The Cost Approach	2019
Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012

Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011
Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update	2011
Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004
Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999
Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997
Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996

3.11. Traffic Statement

Riverstone Solar, LLC
Construction Traffic Statement

Buckingham County, Virginia

January 12, 2022

Attn: Jimmy Merrick

Riverstone Solar, LLC

Apex Clean Energy, Inc.

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Charlottesville, VA 22902

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Project Overview

Riverstone Solar, LLC (the "Applicant" or "Riverstone") is proposing a 149.5 MW AC solar energy facility in northern Buckingham County on 1,996 acres (the "Property"). The site is located off Paynes Pond Rd, North of Bridgeport Rd, East of Route 20, and West of Hardware Rd (See Figure 1 below). The site currently consists of a commercially managed timber operation. To limit stream crossings of internal access roads, the project is proposing three (3) construction and Operations and Maintenance (O&M) entrances off Route 652 (Bridgeport Rd) and two (2) construction and O&M entrances off Route 679 (Paynes Pond Rd). The project also proposes one (1) O&M entrance off Georgia Creek Rd, however, use of Georgia Creek Rd during construction of the facility will be prohibited. Please see Exhibit 3 for locations of the proposed entrances. The remainder of this document will focus on the traffic generated from construction of the facility.

Proposed Construction Traffic Routes

Anticipated construction traffic routes to the project site include Route 20 (S Constitution Route) to the west and US-15 (N James Madison Hwy) to the east. Traffic will travel from Route 20 or US-15 onto Bridgeport Rd to the project site. A portion of construction traffic will also utilize Paynes Pond Rd via Bridgeport Rd. Construction traffic will be restricted from utilizing the surrounding roads of Georgia Creek Rd, Quail Run Ln, and the Northern entrance of Paynes Pond Rd. Please see Figure 2 and Figure 3 below for anticipated traffic routes.

Construction Traffic Control

Temporary traffic control signs will be installed as required by Virginia Department Of Transportation (VDOT). At a minimum, temporary traffic control signs will be installed for both eastbound and westbound traffic on Bridgeport Rd as well on Paynes Pond Rd warning of trucks entering and leaving and warning of an increase in construction traffic.

Project Intersections

Two key intersections for construction site access are Route 20 and Bridgeport Rd and US-15 and Bridgeport Rd. Both intersections are stop controlled on Bridgeport Rd only and do not require any improvements to handle the proposed construction traffic.

Transit

Public transit is not provided in the vicinity of the solar facility; therefore, no conflicts are anticipated.

Project Schedule

It is anticipated that construction will be begin in Q4 2022 and will last 12 months. A breakdown of expected construction activities is as follows:

- 3-4 months of site grading and site preparation including installation of erosion control and stormwater devices and construction of site access roads
- 4-6 months of solar panel and electrical wire installation
- 1-2 months of site commissioning and clean-up activities

Construction Traffic Estimates

Construction traffic will consist of component deliveries (i.e. solar panels, racking, piles, inverters, etc.) and passenger vehicles (pick-up trucks) carrying personnel, tools and minor equipment to and around the construction site.

The following assumptions were used in calculating a truck count estimate for the proposed site:

- 15 Cubic yards capacity for dump trucks carrying gravel
- Estimated 8.5 miles of interior gravel roads at 14 feet wide will be constructed
- Approximately 660 panels per truck
- Approximately 560 trucks for racking and foundations will be required
- Approximately 65 trucks for electrical wire and equipment will be required

Based on the above information it is estimated the site will generate approximately 2,700 truck trips during the construction. The largest number of deliveries will be in the form of dump trucks loaded with gravel for the interior site access roads and temporary laydown and staging areas, followed by deliveries of the solar panels themselves.

Once the total number of trucks trips is separated out across site preparation (50% of site-generated traffic), solar panel and electrical installation (40% of site generated traffic) and site commissioning and clean up (10% of site generated traffic), it is estimated the site will generate approximately 23 truck trips per day during site preparation, 13 truck trips per day during panel and electrical instillation, and 10 truck trips per day during site commissioning.

All project deliveries will be delivered via standard tractor trailers (WB-50 or WB-62 with an 80,000 lb. weight limit) or standard dump trucks with the exception of one delivery carrying the main power transformer to be installed in the project substation. This will be delivered via a flatbed semi-truck with a total weight exceeding 80,000 lbs. However, the trailer is equipped with additional axles to distribute the additional load on the roadway. All necessary permits will be received by VDOT prior to the start of construction.

Construction employees will consist of laborers, electricians, supervisory personnel, support personnel, and construction management personnel. It is anticipated that there will be an average of 150 workers on site with shorter, peak periods of up to 482 workers on site during panel installation. Construction will generally be performed during daylight hours starting from the earlier of sunrise or 8:00 a.m. to the later of 6:00 p.m. or sunset, Monday through Sunday. All pile driving activity shall be limited to Monday through Saturday. The Applicant may request permission from the Zoning Administrator to conduct construction activities on Sunday, but such permission will be granted or denied at the sole discretion of the Zoning Administrator.

Due to the rural nature of the site, and with existing State and US highways within proximity to the project site, it is not expected that the surrounding roadways will be significantly impacted by construction traffic. The truck traffic during construction will be similar to that of when the site is being logged, which is its current land use. After construction, traffic to the site will have a negligible impact consisting of 1-2 trips a month for maintenance, typically with pick-up trucks for landscaping activities. If traffic issues arise during the construction of the site, the Applicant shall develop, with input from Buckingham County and VDOT, appropriate mitigation measures.

Riverstone Solar

Buckingham County, VA

Figure 1: Project Location

- Project Boundary
- County Boundary
- Highways
- Major Roads
- Streets
- Ramps
- Ferry Crossing

Date: 6/24/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

Buckingham

0 2 4 8 Kilometers
0 1.25 2.5 5 Miles

Document Path: N:\Staff Projects\RSS_Riverstone\GIS\MXD\Construction Plans\RSS_TrafficStudy_Construction_Plans_20210624.mxd

Riverstone Solar

Buckingham County, VA

Figure 2: Anticipated Traffic Routes

- Project Boundary
- County Boundary
- Proposed Construction Traffic Routing
- Highways
- Major Roads
- Streets
- Ferry Crossing

Date: 7/23/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

Buckingham

0 0.5 1 2 Kilometers
0 0.45 0.9 1.8 Miles

Riverstone Solar

Buckingham County, VA

Figure 3: Anticipated Traffic Routes & Access Points

- Project Boundary
- Proposed Construction Traffic Routing
- Prohibited Routes for Construction Traffic
- Major Roads
- Streets
- Ferry Crossing

Date: 7/23/2021 *CONFIDENTIAL*

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

APEX CLEAN ENERGY

O&M Only Access

Construction and O&M Access

FLUVANNA
BUCKINGHAM

CSX Railroad

Little George Creek

Paynes Rd

Hardware Rd

Rockfish Creek Ln

Napier Ln

Noble Ln

Sharps Creek Rd

Dana Mill Rd

Ridge Path Rd

Hunting Lodge Rd

SR 713
SR 625
SR 695
SR 720
SR 20
SR 762
SR 784
SR 679
SR 719
SR 652
SR 611
SR 646
SR 684
SR 678
SR 721
SR 704

0 0.35 0.7 1.4 Kilometers
0 0.225 0.45 0.9 Miles

3.12. Sample Decommissioning Plan

Carvers Creek LLC

Decommissioning Plan

October 2020

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

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Issue and revision record

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			ENGINEERING RECORD		**DATE**
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			CHECKED BY: NBF		
			EGM	NF	EGM
0		Draft to Client 10/20/20	EGM	NBF	EGM
REV.	***DATE***	***DESCRIPTION***	***PREPARED***	***CHECKED***	***APPROVED***

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Executive Summary

This Decommissioning and Restoration Plan (“Plan”) for the Carvers Creek Solar Project (”Project”) was prepared by the Timmons Group and Carvers Creek LLC ("the Project Owner"). The Plan has been prepared to address the requirements of Code of Ordinances of the Gloucester County, Virginia and provides for the decommissioning of the Project and restoration of the Project site at the end of the Project’s useful life or in the unlikely case of its abandonment. The Plan provides an overview of all activities related to the removal of the solar energy system, its equipment and panels, and any appurtenant structures and for restoration of the site to its previous condition as much as reasonably practicable.

The facility has an engineered design life of thirty-five (35) years and may be reasonably expected to economically produce beyond its designed life. This Plan, however, assumes that decommissioning activities will be completed at the end of the economic useful life of the Project

During decommissioning all of the Project’s facilities will be dismantled and removed. During restoration, the Project site will be returned to its previous condition. If it is agreed upon with the County, and the landowner, some or all the Project access roads may be kept in place for continued use.

The Project Owner will meet with the County prior to ceasing operations, to review its plans to decommission the Project and restore the premises. Within twelve (12) months of initiating the decommissioning, the Project Owner will remove the relevant components from the land and restore the site as described below.

The decommissioning of the Project and restoration of the site will comply with any applicable municipal, state and federal regulations. As with the construction, a manager responsible for safety will be present on site for the duration of the work.

The Project Owner will ensure that the decommissioning and restoration of the proposed facility is carried out in accordance with Gloucester County’s requirements and the measures and practices described in this Plan. This will include but not be limited to:

- Providing notification regarding the plans to continue or cease the operation of the Project.
- Providing a schedule for the start and completion of the decommissioning and restoration activities.
- Providing site restoration measures that will ensure that the nutrient content of the soil is restored, if necessary, to its prior condition.
- Providing restoration of the site, as practicable, to its pre-construction state as

timberland and pastureland.

- Providing a decommissioning and restoration cost estimate as well as the methods for ensuring that the funds will be available for decommissioning and site restoration.

1. Introduction and Project Description

The Carvers Creek Solar Project is being planned by Carvers Creek LLC. This Decommissioning and Restoration Plan is being submitted to Gloucester County.

Carvers Creek LLC proposes to develop this project with a maximum nameplate capacity of 150 MW AC as described in the conditional use permit application.

The following Plan is based on today's known technologies, means, and methods. These may change over the life of the Project and in accordance with the Code of Ordnances (Sec 9-28 (f)) will be updated every five (5) years along with the cost estimate and corresponding financial instrument to adjust for inflation and any other necessary changes.

2. Methodology

This Plan provides an overview of all activities during the decommissioning phase of the Project, as well as all activities related to the restoration of the Project site and the management of excess materials and waste.

3. Decommissioning Plan Overview

The facility has an engineered design life of thirty-five (35) years and may be reasonably expected to economically produce beyond its designed life. This Plan, however, assumes that decommissioning activities will be completed at the end of the economic useful life of the project.

Project Owner will meet with the County prior to ceasing operations, to review its plans and schedule for decommissioning the Project and restoring the premises.

During decommissioning all of the Project's facilities will be dismantled and removed, including the perimeter fences, concrete foundations (to a depth of 3 ft below grade), steel piles, mounting racks, trackers, Photovoltaic ("PV") modules, above-ground and underground cables (to a depth of 3 ft below grade), transformers, inverters, fans, switch boxes, fixtures, combiner boxes and project substation (as identified in the Site Plan package submitted by Timmons Group September 28, 2020). All above ground structures including circuit breakers, chain link fencing, main power transformer and control buildings will be removed. All electrical equipment will be removed for reuse or disposal and will carry a significant salvage value. All fill and gravel will be removed, and the site will be graded to restore terrain profiles to the extent practicable.

Within twelve (12) months of initiating the decommissioning, Project facilities will be removed from the leased land and restoration will be completed.

3.1 Decommissioning During Construction (Abandonment of the Project)

In the unlikely event that the construction of the project ceases prior to completion, the installed components and all materials on the Project site will be removed and recycled or properly disposed of and the site restored in accordance with applicable regulations and the process described below.

3.2 Decommissioning After Ceasing Operation

In the event that the operation of the solar farm ceases prior to the end of its useful economic life, the installed components will be removed and recycled, and the site restored in accordance with applicable regulations and the procedures described below.

4. Decommissioning of the Renewable Energy Generation Facility

4.1 Equipment Dismantling and Removal

Many of the Project's components are largely composed of recyclable materials, including glass semiconductor material, steel and wiring. When the project reaches the end of its operational life, reusable and recyclable parts will be dismantled, removed from the site and transported to reuse or recycling facilities All waste resulting from the decommissioning of the facility will be transported by a certified and licensed contractor and taken to a landfill facility.

4.1.1 Above-ground Structure Decommissioning

In the event that the project requires decommissioning, the following sequence for the removal of the components will be used:

Solar Panel Arrays and Project Substation:

- De-energize and disconnect the Project from the utility power grid;
- Disconnect all above ground wirings, cables, fuses and electrical and protection components and reuse or recycle off-site by an approved facility;
- Remove concrete foundations of inverter and transformer pads to a depth of 3 ft below grade;
- Remove PV modules and metallic structures and ship to reuse or recycling facilities for aftermarket use or recycling and material reuse;

- Remove all waste;
- Remove the perimeter fence and recycle off-site by an approved metal recycler.
- Remove inverters, transformers, meters, fans, lighting fixture and other electrical components and recycle off-site by an approved recycler;

Access Roads:

- Facility access roads will be used for decommissioning purposes, after which removal of roads will be discussed with the Landowner and the County to determine if any access roads may be left in place for their continued use.
- If access road is deemed unnecessary, remove access road and restore access road location as practicable to its previous condition with native soils and seeding. Should the landowner decide to keep the roads in place they will not be removed. The plan assumes for cost estimation purposes that the roads will be removed.

Project Substation

- De-energize and disconnect the project substation from the utility power grid.
- Disconnect all above ground wirings, cables, fuses and electrical and protection components and recycle off site by an approved recycling facility.
- Remove concrete foundations to a depth of 3 ft.
- Remove main power transformer, switchgear, bus bar support insulator and steel structures and ship to reuse or recycling facilities for aftermarket use or recycling and material reuse.
- Remove all waste.
- Remove the perimeter fence and recycle off-site by an approved metal recycler.
- Disconnect all electrical equipment.

4.1.2 Below-ground Structure Decommissioning

- Disconnect all underground cables, conduits and transmission lines up to 36” and remove and recycle off-site by an approved recycling facility.

- Remove all PV panel racking below and above ground, including the steel pile foundations.

This Plan is based on current best industry practices and procedures. These practices may be subject to revision based on the development of new and improved decommissioning practices in the future.

4.2 Site Restoration

The Project Owner will develop a comprehensive restoration plan designed to restore the site so it can be returned to its previous use as pasturelands and timberlands. Restoration will include the following:

- Topsoil will be redistributed as necessary to provide essentially the same ground cover as was present prior to the site disturbance.
- Access roads and other areas that become compacted during Project operation will be decompacted to their previous conditions.

Where Project infrastructure has been removed, disturbed areas will be seeded with quick growing native species to prevent topsoil erosion. Erosion and control measures will be installed at ditches and will be left in place until ground cover is fully established.

4.2.1 Watercourses

The project was designed to avoid any waterbodies and the renewable energy facility does not release emissions which could pollute the air and water bodies, no impact to aquatic environment is expected. As a result, no restoration of waterbodies, either during construction or decommissioning is planned. Wetlands will be avoided in the design and construction process.

4.2.2 Agricultural Lands

Once all Project facilities are removed, agricultural and silvicultural lands compacted during project operation (such as access roads) will be decompacted via tilling, plowing or subsoiling and affected areas will be seeded with native grass species.

Similar to the construction phase, soil erosion and sedimentation control measures will be re-implemented during the decommissioning period and until the site is stabilized in order to mitigate erosion and silt/sediment runoff.

Access roads will be left based on agreement with the County and Landowner or graded to restore terrain profiles (to the extent practicable) and vegetated. If removed, filter fabric will be bundled and disposed of in accordance with all applicable regulations. As necessary, these areas will be backfilled and restored

to meet existing grade. This material may come from existing long-term berm or stockpile.

The decommissioning of the site will include returning the site to allow the total runoff from the site to be similar to pre-construction conditions.

4.3 Managing Excess Materials and Waste

During the decommissioning phase, waste materials will be removed in accordance with applicable local regulations. This will include but not be limited to obtaining all required permits and doing all soil testing as deemed necessary either by permit or additionally by third party professionals to insure there is no contamination of the site after removal has occurred. It is the goal of the Project Owner to reuse and recycle materials to the extent practicable and to work with local subcontractors and waste firms to segregate material to be recycled. As an example, since the mounting racks are made up of manufactured metal, it is anticipated that nearly 100% of the above grade metal is salvageable based on current industry practices and trends.

Many components of the Project are reusable or recyclable and have salvage value. The Project Owner will manage decommissioning to minimize, to the extent practicable, the volume of project components and materials discarded as waste. Table 4.1 below outlines the anticipated disposition methods of the different project components.

Table 4.1

Anticipated Project Decommissioning Disposition Methods

Component	Disposition Method
Concrete Foundations	Crush and recycle
Solar Panels	Reuse or recycle
Metal racks and mounts	Salvage/recycle
Steel piles and rack foundations	Salvage/recycle
Wiring and cabling	Recycle/salvage
Inverters, transformers, and breakers	Salvage/recycle/reuse
Granular material	Reuse/dispose
Main power transformer	Reuse/sell

High voltage circuit breakers	Reuse/sell
Project Substation steel and switches	Reuse/salvage/recycle
Fence steel	Salvage/recycle
Project Substation Controls	Dispose/reuse

Major pieces of equipment such as transformers and breakers are recyclable and reusable and will have significant market value. The solar panels are expected to retain over 85% of their generation capability after 35 years of operation so their market value as a reusable item is very high.

Existing solar panel manufacturers have programs to buy and salvage panels.

These programs extract the raw materials in the panels to make new panels at a significant discount from new material costs. Recycled materials include the semiconductor and glass.

Other components such as electrical cable have a high salvage-market value due to their copper and aluminum content. The same is true for the steel and aluminum racks and foundations that support the solar panels.

As the great majority of the facility will consist of reusable and recyclable items, only a small percentage of the project components and materials will be disposed of in landfills. Any items or materials that are landfilled will be nontoxic. The Project Owner will assume the responsibility for removing this material from the site and properly disposing of it.

5. Decommissioning Costs and Salvage

The following table below lists the estimated decommissioning costs to remove the project components and restore the site to its previous condition.

Table 5-1 – Detailed Decommissioning Costs

Carver's Creek Solar Project
Detailed Decommissioning Cost Estimate

Item	Qty	Cost/Unit	Total Cost
455/460 W Solar Panels	402,038	$5/unit	$2,010,190
Solar Panel Support Steel Piles	20,370	$15/unit	$305,550
Solar Panel Racks	4074	$50/unit	$203,700
4.995 kVA Inverters	126	$500/unit	$63,000
3.8 KVA Transformers	44	$3,000/unit	$120,000
Fence Removal	100,424 ft	$1/ft	$100,424
Conductor Removal	1,080,308 ft	$0.50/ft	$540,154
Substation Transformer	1	$30,000	$30,000
34.5 kV Circuit Breakers	6	$7,500	$30,000
115 kV Circuit Breaker	1	$7,500	$7,500
Substation Steel	1	$300,000	$300,000
Substation Foundations	1	$100,000	$100,000
Substation Control House*	1	$10,000	$10,000
Site Remediation	851.81 ac	$2,500/acre	$2,129,525
Permitting and Engineering			$500,000
Total			**$6,450,043**

Project Size: 150 MW ac (184 MW dc)
Project land area: 1,198.90 acres
Disturbed land area: 851.81 acres
*Final project design may not include these facilities

The Project components will have a salvage value at the end of their useful life. Table 5-2 below shows those values based on information known today about the assets.

Table 5-2 Estimated Salvage Value of Project Components

Project Component	Qty	Estimated New Cost/Unit	Estimated New Total Cost	Estimated Salvage Value*
455/460 W Solar** Panels	402,038	$0.33/W	$60,630,900	$6,063,090
3800 KVA transformers	44	$50,000	$2,200,000	$220,000
Conductor	1,080,308 ft	$1.00/ft	$1,080,308	$108,031
Substation Transformer	1	$800,000	$800,000	$80,000
35 kV Circuit Breakers	4	$35,000	$140,000	$14,000
115 kV Circuit Breaker	1	$150,000	$150,000	$15,000
Fence Posts (Gal)	@7020	$120.00	$842,400	$210,600
***Module Racks (Al)	10,211,949 lbs			$408,478
***Steel piles	5,345,368 lbs			$574,627
Fence steel (assumes commercial fencing 8' high, 1.30 lbs per square foot)	1,215,097 lbs			$130,622
Total Salvage Value				**$7,824,448**

*Estimated salvage values are 10% of original cost except where noted.

****** Salvage value of these components for after-market use is estimated to be 10% of original cost. After 35 years of use, solar panels are expected to generate electricity at approximately 85% of their original capacity.

*** Used present market scrap price per Capital Scrap Metal schedule 10/20/2020. The salvage prices are $0.04/lbs. for aluminum and $215/ton. for steel.

As noted in Table 5-2, the total estimated decommissioning costs will be **$6,450,043** and the total estimated salvage value of Project components will be **$7,824,448**

6. Decommissioning Assumptions

To develop a cost estimate for the decommissioning of the Carvers Creek Solar Project, Timmons Group made the following assumptions and costs were estimated based on current pricing, technology, and regulatory requirements. The assumptions are listed in order from top to bottom of the estimate spreadsheet. We developed time and materials-based estimates considering composition of work crews. When materials have a salvage value at the end of the project life, the construction activity costs and from the hauling/freight cost are separated from the disposal costs or salvage value to make revisions to salvage values more transparent.

1. Decommissioning year is based on a 5-year initial period for the financial security. The projected life of the project is 35 years.
2. This Cost Estimate is based on the Timmons Group Site Plans dated September 28, 2020.
3. Common labor will be used for the majority of the tasks except for heavy equipment operation. Pricing is based on local southeast US labor rates.
4. Permit applications required include the preparation of a Stormwater Pollution Protection Plan (SWPPP) and a Spill Prevention Control and Countermeasure (SPCC) Plan.
5. Road gravel removal was estimated on a time and material basis using a 16-foot width and an 8-inch thickness for the access roads. Substation aggregate is included in the substation quantities. Since the material will not remain on site, a hauling cost is added to the removal cost. Road aggregate can often be disposed of by giving to landowners for use on driveways and parking areas.
6. Fence removal includes loading, hauling, and recycling or disposal. Fence and posts weigh approximately 10 pounds per foot.
7. Array support posts are generally lightweight “I” beam sections installed with a piece of specialized tracked equipment. Crew productivity is approximately 240 posts per day, and the same crew and equipment should have a similar productivity removing the posts, resulting in a per post cost of approximately $13.00.We assume a cost of $15.00 per post to include hauling fees and contingencies.
8. A metal recycling facility (Middlesex Metals Inc.) is located in Urbanna, VA and is twelve miles from the project site. Pricing was acquired from www.scrapmonster.com. The posts weigh approximately 150 pounds each, and we estimate the hauling costs at approximately $0.29 per ton mile.
9. Hauling the steel to Urbanna, Virginia at $0.29 per ton mile costs about $3.48 per ton.
10. The solar panels rated at 460 watts and can easily be disconnected, removed,

and packed by a three-person crew at a rate we estimate at 12 panels per hour.

11. No topsoil is planned to be removed from the site during decommissioning and most of the site will not have been compacted by heavy truck or equipment traffic so the site turf establishment cost is based on RS Means unit prices for applying lime, fertilizer, and seed at the price of per acre plus an allowance for some areas to be decompacted.
12. The steel posts are priced based on 75 percent of the HMS (high melt steel) 80/20 the price listed on www.scrapmonster.com on June 22, 2020. ($215 per ton)
13. There is an active market for reselling and recycling electrical transformers and inverters with several national companies specializing in recycling. We have assumed a 25% recovery of these units based on field experience with used transformers as opposed to trying to break them down into raw material components.
14. The underground collection lines are assumed to be aluminum conductor. The collection lines will be buried deep enough so that they do not have to be removed.
15. Care to prevent damage and breakage of equipment, PV modules, inverters, capacitors, and SCADA must be exercised, but removal assumes unskilled common labor under supervision

The estimated salvage values are derived from years of experience decommissioning and uprating electric substations, overhead transmission and distribution hardware and underground distribution hardware that would include but not be limited to substation and pad mounted transformers, overhead and underground conductors, poles, fencing, ground grid conductors, control housings, circuit breakers (high and medium voltage), protective relaying, and other hardware items. These individual items have high salvage value either as stand-alone components to be reused or recycled and sold as used items. These items also have a relatively high salvage value as pure scrap for steel, copper and other commodities.

For all medium voltage transformers, breakers and other items, Southeastern Transformer Company in Dunn, NC provides complete repair, upgrading and recycling and resale for all items mentioned above. Their website is: https://www.setransformer.com.

For any and all recycling and upgrading, Solomon Corporation offers the same set of services for transformer repair and recycling and complete substation decommissioning services. With seven different locations, Solomon is one of several vendors that can decommission and recycle the components as noted above. Their website is: https://www.solomoncorp.com/. Solomon Corporation is only one of many transmission and distribution recycle and decommissioning shops that do this mainly to harvest the components.

For recycling conductor, General Cable and Southwire both utilize extensive scrap procurement programs to reuse copper and aluminum conductor harvested from projects such as this one to supplement and reduce their raw material costs. Here is the link to the General Cable program which only increases the salvage values found in this Plan: General Cable Recycling:

https://es.generalcable.com/na/us-can/socialresponsibility/sustainability/recycling

As for solar panels, they are in demand as salvageable items either in whole or for their raw material. According to the International Renewable Energy Agency (IRENA), more than 90% of all the materials are high grade silicon, aluminum and glass and are typically harvested to produce new panels. This is far less expensive than buying unprocessed raw materials for production.

The base industry assumption is that since solar panels are expected to retain about 85% of their production capability after 35 years of use, a salvage value of 10% of original cost is a low estimate of their expected value and as we note in assumption. This considers possible technology improvements and undervalues the anticipated salvage value of the panel's raw materials. The Solar Energy Industries Association (SEIA) has an approved set of PV recycling vendors that specialize in doing this today and they can be found at: https://www.seia.org/initiatives/seia-national-pv-recycling-program.

First Solar, which has been active in the solar industry since its inception, takes solar modules and recycles 90% of the semiconductor material which is then reused in new modules. 90% of the glass product can be reused as new glass products, including panels and fiber optic cable. We can conclude that realistically the estimated 10% salvage value is low and reflects a conservative figure. Information about First Solar's recycling program is at: http://www.firstsolar.com/en/Modules/Recycling.

For raw material recycling (steel and aluminum in this case) we used the scrap metal pricing supplied by Capital Scrap Metal LLC, a major scrap metal vendor with scrap metal sites s in Pompano Beach, Deerfield, West Palm Beach and Stuart, Florida. They serve major industries, municipalities manufacturers, and also do Corporate Recovery programs domestically and internationally, largely in the Caribbean basin and Latin America. Their website for pricing is as follows: https://www.capitalscrapmetal.com/prices/.

7. Decommissioning Notification

At least 30 days prior to commencing decommissioning of the Project and restoration of the site, the Project Owner shall notify Gloucester County of its scheduled start and completion dates of project decommissioning and site restoration.

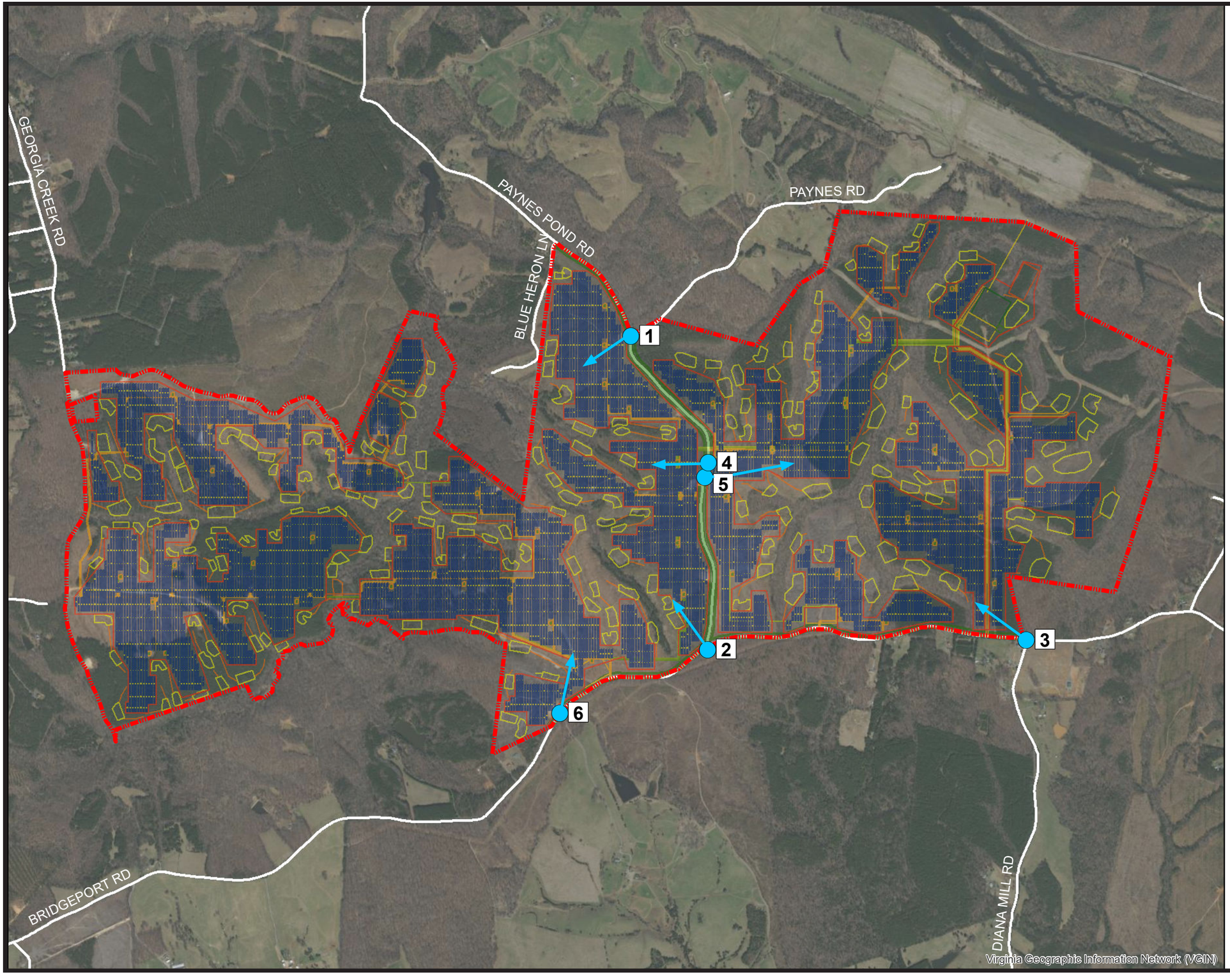
No later than 12 months after the abandonment or closure of the Project and within 30 days of completing decommissioning and site restoration, the Project Owner shall provide

written documentation acceptable to the County demonstrating that the Project has been decommissioned, that the Project site has been restored and that the solar panels and related equipment were properly disposed of in accordance with local, state and federal regulation.

8. Decommissioning Bond

The decommissioning surety, if required, will be in place prior to obtaining the Land Disturbance Permit for the Project per the Code of Ordinances. The financial mechanism is subject to the evaluation and approval of the County as to the creditworthiness and financial capabilities of the counterparty. Every five (5) years, over the life of the Project, an updated estimate of decommissioning costs will be prepared to adjust for inflation and any other necessary changes. The Project Owner shall provide the revised cost estimate to the County for approval, and execute an adjustment to the financial guarantee mechanism, if required.

3.13. Visual Simulation Analysis



RIVERSTONE SOLAR

N

0 1,200 2,400 Feet

(At original document size of 11x17)
1:18,456

Legend

- Photo locations
- Project boundary
- Panels
- Vegetation Buffer

Stantec

PHOTO LOCATION 1: EXISTING

PHOTO LOCATION 1: 5-7 YEARS

PHOTO LOCATION 1: EXISTING

PHOTO LOCATION 1: 10-15 YEARS

PHOTO LOCATION 2: EXISTING

PHOTO LOCATION 2: 5-7 YEARS

PHOTO LOCATION 2: EXISTING

PHOTO LOCATION 2: 10-15 YEARS

PHOTO LOCATION 3: EXISTING

PHOTO LOCATION 3: 5-7 YEARS

PHOTO LOCATION 3: EXISTING

PHOTO LOCATION 3: 10-15 YEARS

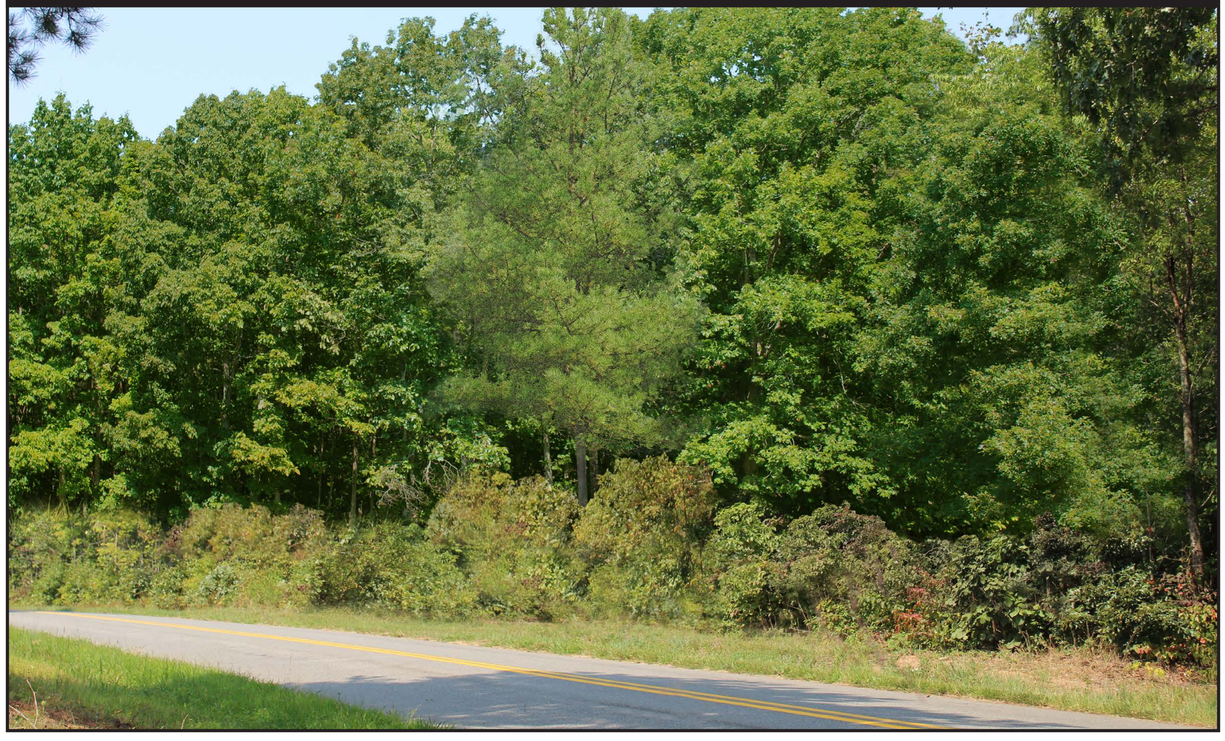


PHOTO LOCATION 4: EXISTING

PHOTO LOCATION 4: 5-7 YEARS

PHOTO LOCATION 4: EXISTING

PHOTO LOCATION 4: 10-15 YEARS

PHOTO LOCATION 5: EXISTING

PHOTO LOCATION 5: 5-7 YEARS

PHOTO LOCATION 5: EXISTING

PHOTO LOCATION 5: 10-15 YEARS

PHOTO LOCATION 6: EXISTING

PHOTO LOCATION 6: 5-7 YEARS

PHOTO LOCATION 6: EXISTING

PHOTO LOCATION 6: 10-15 YEARS

21 Building Permits were issued in the amount of $4121.45 for the month of December 2021

Permit No.	District	Name	Purpose	Cost of Construction	Cost of Permit
18785	Slate River	Michael Boyce	Commerical Construction	$60,000.00	$190.33
18786	James River	Anothony Vinson	Electrical	$1,200.00	$25.50
18788	Maysville	Diane Blackburn	Mechanical	$4,700.00	$25.50
18789	Slate River	Jerry Wingfield	Mobile Home- Singlewide	$2,500.00	$207.63
18793	Marshall	Oakwood of Farmville	Mobile Home- Singlewide	$43,031.00	$300.65
18794	Maysville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18795	Maysville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18795	Maysville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18797	Curdsville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18798	Curdsville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18799	Curdsville	Sleepy Meadows LLC	Mobile Home- Singlewide	$60,000.00	$232.38
18800	Francisco	Second Liberty	Electrical	$1,500.00	$25.50
18801	Curdsville	Amber Demers	New Dwelling- Stickbuilt	$55,000.00	$336.40
18802	Marshall	Thomas Ranson	Detached Garage Addittion	$0.00	$59.36
18803	Curdsville	MLS Inc. DBA Country Living Homes	Modular Unit	$260,000.00	$652.11
18805	Marshall	Kenneth Stallman	Residential Addittion	$4,034.23	$51.00
18807	Francisco	Roy Miller	New Dwelling- Stickbuilt	$180,000.00	$487.19
18810	Curdsville	US Cellular Corp.	Commerical Addittion	$15,000.00	$239.50
18811	Maysville	Thomas Ranson	Electrical	$500.00	$25.50
18812	Maysville	JES Construction	Residential Addittion	$10,678.09	$51.00
18646		CMH Homes	Re-Inspection Fee		$50.00
21					
Cost of permit is calculated based on square footage of structure				$998,143.32	$4,121.45