PRINCE EDWARD COUNTY
PLANNING COMMISSION
October 15, 2019

A G E N D A

7:00 p.m.	**1.**	The Chairman will call the October meeting to order.	
	2.	Approval of Minutes	1
	3.	Amendment to the County's Zoning Ordinance	9
	4.	Review of Board of Supervisors Action	
	5.	Old Business	
	6.	New Business	

Next Meeting: TBD

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County of Prince Edward
Planning Commission
Agenda Summary

Meeting Date:	**October 15, 2019**
Item No.:	**2**
Department:	**Planning and Community Development**
Staff Contact:	**Wade Bartlett**
Issue:	**Approval of Meeting Minutes**

Summary:

Approval of Meeting Minutes - August 20, 2019

Attachments: Meeting Minutes

Recommendations: Approval

Motion _____	Paige _____	Hunt _____	Jones _____
Second _____	Sandlin _____	Gilliam _____	Watson _____
Prengaman _____	Jenkins _____	Leatherwood_____	Peery _____

Prince Edward County Planning Commission
Meeting Minutes
August 20, 2019
7:00 pm

Members Present:	John Prengaman, Chair	John "Jack" W. Peery, Jr., Vice Chairman
	Donald Gilliam	Preston L. Hunt
	Mark Jenkins	Clifford Jack Leatherwood
	Whitfield M. Paige	Teresa Sandlin
Absent:	Robert "Bobby" Jones	Cannon Watson
Staff Present:	Wade Bartlett, County Administrator	

Chairman Prengaman called the August 20, 2019 meeting to order at 7:00 p.m.

Approval of Minutes: June 18, 2019

Commissioner Peery made a motion, seconded by Commissioner Jenkins, to approve the meeting minutes from June 18, 2019 as presented; the motion carried:

Aye:	Donald Gilliam	Nay:	(None)
	Preston Hunt		
	Mark Jenkins		
	Clifford Jack Leatherwood		
	Whitfield M. Paige		
	John "Jack" W. Peery, Jr.		
	John Prengaman		
Absent:	Robert M. Jones		Cannon Watson

In Re: Review of Board of Supervisors Actions

Mr. Bartlett reported the Board of Supervisors approved the Special Use Permit application of Mr. Byler for the wood processing facility; he said Mr. Byler is currently constructing the building to house the operation.

Mr. Bartlett then said the Bonds for the renovation sold at a cost of a half million dollars less than originally thought.

Mr. Bartlett stated Social Services will be moving from the Courthouse to their new building on August 28; paving was done there earlier in the day, and furniture will be delivered to the new building tomorrow.

Mr. Bartlett said that Dominion Energy will be building a path-line; they have a fallback, but the main problem is when it goes under the Appalachian Trail or into the National Forest. He said they have a backup plan but it will not

affect from Buckingham [County] south and will not change. He said permits will be obtained this fall to clean and clear a swath of land about 100 feet wide. He said they will hopefully take care of the trees this fall.

Chairman Prengaman questioned the progress on the Courthouse renovation. Mr. Bartlett said work is on schedule; when Social Services moves out on the 28th, that area will be demolished and work will begin to complete the J&D Court, which has to be complete by December 31. Mr. Bartlett said some work has been done in the Board of Supervisors Room but it is not yet complete.

In Re: Amendment to the County's Zoning Ordinance

Mr. Bartlett said the County, and the entire nation, has seen an explosion in the applications to build large utility-scale solar generation facilities. The County's Zoning ordinance was adopted before this technology had developed to where it is effective. There is no mention of solar generating facilities in our current zoning ordinance. The closest use mentioned in our Zoning Ordinance is **Utility Services, Major.** The definition is:

> **Utility Services, Major** -- *Services of a regional nature which normally entail the construction of new buildings or structures such as generating plants and sources, electrical switching facilities and stations or substations, water towers and tanks, community waste water treatment plants, and similar facilities. Included in this definition are also electric, gas, and other utility transmission lines of a regional nature which are not otherwise reviewed and approved by the Virginia State Corporation Commission.*

Currently this use is allowed in the A1, A2, R1, R2, R3 and C1 zones by a special use permit. Large solar generation facilities are not compatible with the residential and commercial zones. It is allowed in the I1 zone by right. Prince Edward County has very limited land zoned industrial. To allow a solar facility to locate in that zone BY RIGHT could easily mean one solar project could occupy a very large percentage of the County's industrial zoned land. This would greatly hinder, if not outright stop, any future industrial development in the County without the expenditure of millions of dollars of taxpayer funds to build or expand industrial parks.

These projects often utilize hundreds of acres of land and just a few such projects could cover thousands of acres. These projects are long-term, at least 25 years. Left unchecked, these projects can have a profound impact on the land use in the County. These utility-scale facilities are rather new on the scene and as with any new technology or land use, unknown and unintentional consequences are bound to happen. County staff recommends the Planning Commission direct County staff to research utility-scale solar and wind generation facilities and draft a proposed amendment to the Zoning Ordinance to minimize the negative impact of such facilities on land use and the citizens of the County.

Chairman Prengaman said the County must be proactive and put together a policy, whether it be a committee or sub-committee to research and understand what should be considered, what controls should be in place, and possibly even soliciting and targeting companies to come to Prince Edward County. He recommended the Planning Commission request the Board of Supervisors set up a committee to research this issue. Discussion followed.

Mr. Bartlett said where they can be located is limited to the proximity of transmission lines because they have to feed back onto the transmission lines. He said the one that was approved about two years ago still hasn't started; when the County approves a special use permit, it never expires. He said in other counties, the policy is that if no action is taken within a certain time, the permit expires. He said Prince Edward County may want to consider that option.

Chairman Prengaman said he will discuss with the other Commission members for appointments to the committee and a timeline.

In Re: Special Use Permit – Holocene Clean Energy

Chairman Prengaman announced this was the date and time scheduled for a Public Hearing on a Special Use Permit application to permit the operation of a solar generation facility, on Tax Map Parcels 69-4-B and 69-A-14, owned by Ana Sawyer, located in the vicinity of 1827 Piney Grove Road (SR606). Notice of this hearing was advertised according to law in the Friday, August 2, 2019 and Friday, August 9, 2019 editions of THE FARMVILLE HERALD, a newspaper published in the County of Prince Edward.

Chairman Prengaman reviewed the public hearing process.

Mr. Bartlett said the County has received a Special Use Permit application to permit the construction and operation of a solar generation facility, on Tax Map Parcels 69-4-B and 69-A-14, owned by Ana Sawyer, located in the vicinity of 1827 Piney Grove Road (SR606).

Mr. Bartlett stated Holocene provided a summary of the project, which provides a good overview of the project that is accurate, located on 20 acres, will be surrounded by a security fence and will be buffered, and provided a site plan. He stated that while doing research on solar farms and solar panels, he found information that contradicts some of the information contained in the materials provided by Holocene. Mr. Bartlett said Holocene contacted adjoining landowners and also property owners "once removed," approximately 40 citizens. Mr. Bartlett reported he received one telephone call from an adjacent owner asking about the project and several calls from people not adjacent questioning the signs noticing the public hearing.

Mr. Bartlett said that first, lithium-ion batteries do contain toxic materials, namely, Cobalt and contain 10%-13% of cobalt by weight. When used in lithium-ion batteries, cobalt provides the risk of thermal runaway, a chemical reaction internal to the battery, regardless of ambient temperature. When a battery containing cobalt degenerates and goes into a state of thermal runaway, it becomes an unmitigated fire that is toxic and cannot be extinguished by water or flame retardants, or contained within its housing. Instead, the fire must be allowed to burn, releasing toxic fumes. Holocene acknowledges the potential of such thermal runaways in their summary and the steps they will take to mitigate such risks.

Mr. Bartlett said that it appears the panels and the racking system themselves contain hazardous material. He reviewed various articles found online that discuss the potential problems with solar panels during installation, operation and disposal. He said that of particular concern is the statement in one article is "the fact that cadmium can be washed out of solar modules by rainwater…"

Mr. Bartlett said the microclimate impacts that solar farms have on areas where they are located can be detrimental. He said his research found that solar farms create islands of heat the can have detrimental impacts on vegetation, animals and insects. Determining the exact impact of solar farms on the climate was beyond the scope of the letter. Additional research needs to be completed before full comprehension on this topic.

Mr. Bartlett then said Section 15.2-22411.2 of the *Code of Virginia* requires a written agreement to decommission the facility prior to being approved. The County has not received such a plan.

Mr. Bartlett said staff has not had enough time to study the impact solar farms will have on property values, or impacts on long-term land use. Mr. Bartlett stated that because of questions raised by staff research concerning the possible long-term environmental impacts, the lack of decommissioning plan and the lack of a County policy regarding solar farms, Staff recommends this request be tabled until additional research can be completed.

Davis Plunkett, Holocene Energy Development Project Manager, reviewed a presentation covering a project overview, environmental considerations, equipment, battery storage, site maintenance and decommissioning. He also presented economic development benefits for the County. He said the inclusion in the Ordinance is a very prudent thing to do; he said there is a great interest in solar farms in Virginia, and stated that the creation of an ordinance is a smart thing to do. In context, he said the proposed farm is small, and a relatively agreeable land use.

Mr. Plunkett said Holocene is a small company in North Carolina, operating in Virginia, New Jersey and looking for more markets in Pennsylvania, specializing in 2-5 megawatt solar farms. He said the proposed site would house a 3-megawatt site, focusing on local distribution interconnection. He said it is different from a transmission interconnected

project which would be much larger by design and would require a substation and transmission lines to transmit the energy to a large number of users. The project of this size is for energy to be used in the local community; the amount of energy needed at that location, which will be used at the Moran substation has been "kicked off" by interest from Southside Electric Cooperative (SEC). He said the site is a good fit for this type of solar farm; there is a long-term lease agreement and they have been working on this project for approximately a year. Mr. Plunkett reviewed the site plan; he said the site is about 20 acres and they have proactively put vegetative screening on the road frontage to shield the view of the solar farm from neighbors and people on the road. He said the two fields are separated by a driveway for the renter in the back; fifty feet was allowed for the driveway, giving plenty of room. He said the project follows all setbacks and other requirements set forth by the County. He then stated letters were sent to all adjacent landowners; three people were in contact seeking clarification but had no particular concerns.

Mr. Plunkett said this project is in compliance with the County's Comprehensive Plan. He said this will protect the land from other involved or disruptive land uses; there will be no degrading or earth-moving. He said after clearing the property and stumping it, the facility will be built and they will plant grass underneath. He added that screening vegetation will consist of local species of pollinators. He said the energy generated will be distributed back to the community.

Mr. Plunkett spoke about the environmental concerns; he said North Carolina State [University] does a large amount of research in the public interest around clean energy. He said solar farms are a good alternative with zero emission energy source which is better for the environment and human health than coal or natural gas. He said there are decades-long studies of PV and environmental effects, and while the growth of solar has been fairly new, PV is not new and has been around since the 1950s. He said the main components are made of glass, aluminum, steel, copper, and silicone. He then said silicone makes up almost 100% of the module itself, the part that produces the energy; he clarified that the panels used are not cadmium-based but are silicon-based. He said this is due to toxicity concerns and there are no hazardous elements in the modules. The racking is steel and driven into the ground, and then panels are bolted on top and the tracking system allows them to rotate to catch the sun. He added they can stack them to use less land and the transformer will convert energy from the panels to what is used in the grid. He said the battery storage unit will hold the battery, which is actually small cells stacked together. He then discussed the battery storage; he said the batteries are lithium ion and what is most used in electric vehicles.

Mr. Plunkett said the batteries do not include toxic materials; the cadmium is in some and in the form of nickel oxide and is chemically bound to other elements. He said combustion is a concern for the industry; and there are a number of things that would have to go wrong for chemical runaway to occur, but there is a great deal of control to prevent thermal runaway. He said the plastic casing would burn, not the lithium ion solution. He added that there is a fire suppression system that is installed in and primarily used to ensure the runaway doesn't happen; and is National Fire Code Compliant and would allow people to get out of the danger zone. It would not explode but vent off gasses and fumes are vented upwards. In the event it would happen, the manufacturer would come to do an investigation and a full environmental clean-up would take place.

The site maintenance is low-key; sometimes sheep are brought in but more often it is done by a landscaping crew which will use a mower and weed eater to ensure that vegetation is kept down and away from the panels. He said there is also a remote monitoring system in place to ensure the farm is producing and if there are any issues, a technician can dispatch crew to check on it.

Mr. Plunkett stated the decommissioning plan is already being worked on; they received a cost-estimate earlier in the day. He said as of July, law mandates the creation of a decommissioning plan, and he will provide that estimate to the County. When the site is disassembled, they recycle everything that is possible, regrade and stabilize the site if needed and return it to its condition prior to installing the solar farm. This is also mandated in the lease agreement with the landowner.

Mr. Plunkett reviewed economic development benefits; he said the project is tax exempt from M & T (Machinery and Tools) taxes but it is a benefit to the county due to an increased property tax due to the property being reassessed at a higher value. He said it does provide an economic stimulus while building the site, the site also generates energy, and they seek out opportunities to engage with the students and the communities.

Chairman Prengaman asked what the time frame is for this project to be active. Mr. Plunkett said it is expected to be in place for 30 years; the lease is 20 years with a potential for two 10-year extensions.

Chairman Prengaman then asked if they are partnering with Southside [Electric Cooperative]; Mr. Plunkett said this is not a prospective project and they would like to build as soon as possible.

Chairman Prengaman asked how long it would take to complete before it becomes operational; Mr. Plunkett said that after all permits and requirements are met, it would take 22 weeks to construct.

Commissioner Sandlin asked if the proposal includes possible storage onsite; Mr. Plunkett said this farm includes a storage outlet.

Mr. Bartlett asked how much energy it could hold. Mr. Plunkett said the battery is a one-megawatt, four-megawatt hour battery. It has the ability to dispatch one megawatt for four hours.

Chairman Prengaman asked about staffing of the construction crew. Mr. Plunkett stated they will bring in a manager but otherwise hire in the community and do not bring in Holocene staff.

Commissioner Peery asked what percentage of the materials are recycled, and if the panels would need to be replaced if they wished to continue beyond the 30 years. Mr. Plunkett stated most can be recycled and it is mostly commodity steel, copper and aluminum and have significant value. The modules themselves are expected to be recycled; if anything comes to the site broken, it is sent back to the manufacturer. They make use of the components in further manufacturing. He said almost everything can be recycled or salvaged in some fashion. Mr. Plunkett added that the site could be "repowered."

Commissioner Hunt asked for clarification on the life span of the panels; Mr. Plunkett said the modules last about 30 years.

Commissioner Gilliam asked what lightning would do to the solar farm. Mr. Plunkett said all of the fencing and equipment is grounded and is low to the ground; he wasn't sure what could happen but he would look into it and get back to the Commission.

Commissioner Peery asked if there is an automatic shut-off in the event of catastrophic events; Mr. Plunkett said there are two "kill-switches" for the facility, one is owned and operated by the facility and one by the utility. Either side could shut if off. If certain line voltage characteristics occur, it will be automatically triggered to shut off.

Chairman Prengaman opened the public hearing.

Charles Nunnally stated he lives across from this proposed project. He asked how many people in this area have been notified to see what they think. Chairman Prengaman stated that is what they spoke on before regarding the creation of a committee to determine if the County needs a special ordinance to recognize how to look at solar farms, going forward. Chairman Prengaman said an application was presented and approved, but it was a speculation permit and no action has been taken.

Mr. Nunnally asked where others are located. Mr. Bartlett said there are solar farms in Buckingham County, there is one in Charlotte County, Powhatan County, and Mecklenburg County has several.

A citizen asked to see the site map of the project and asked if the solar farm could be seen from the street. Mr. Plunkett presented the map and said that the buffer will not allow the solar panels to be seen from the road.

The citizen then asked about truck access to the site; Mr. Plunkett said there is one access near the substation.

There being no one further wishing to speak, Chairman Prengaman closed the public hearing.

Chairman Prengaman stated it is incumbent upon the Commission to put together a committee to research. He thanked Mr. Plunkett for the presentation but recommended tabling the issue to allow time for research and understanding how to move forward with solar farms in the County. Discussion followed.

Commissioner Jenkins made a motion, seconded by Commissioner Hunt, to table this and recommend to the Board of Supervisors that the Board appoint a Task Force to do research what the Planning Commission needs to do to put something in the Zoning Ordinance specific to solar and wind farms; the motion carried:

Aye:	Donald Gilliam	Nay:	(None)
	Preston Hunt		
	Mark Jenkins		
	Clifford Jack Leatherwood		
	Whitfield M. Paige		
	John "Jack" W. Peery, Jr.		
	John Prengaman		
Absent:	Robert M. Jones		Cannon Watson

In Re: Old Business
(None)

New Business
(None)

Chairman Prengaman declared the meeting adjourned at 8:01 p.m.

Next Meeting: September 17, 2019

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County of Prince Edward
Planning Commission
Agenda Summary

Meeting Date:	**October 15, 2019**
Item No.:	**3**
Department:	**Planning and Community Development**
Staff Contact:	**Wade Bartlett**
Issue:	**Amendment to the County's Zoning Ordinance**

Summary:
During the August 20, 2019 meeting of the Planning Commission the Commission heard a request for the siting of a solar utility-scale solar generation facility on Piney Grove Road. The Commission recommended the Board of Supervisors table the request and appoint a task force to research and develop a proposed amendment to the zoning ordinance to place developmental controls/conditions on solar and wind electrical generation facilities.

The Board of Supervisors directed the County staff to develop a draft of such an amendment to the zoning ordinance.

I researched the zoning ordinances of several Counties in Virginia and found that many do not contain any specific controls on such facilities. I did find three Counties – Amelia, Chesterfield and Halifax that did contain sections in their zoning ordinance that dealt with either solar and or renewable energy generation facilities. I used the Chesterfield Ordinance as the primary template but have deleted some portions and/or added items from the other two Counties.

Attached is a draft of zoning amendment. It is not complete as it does not contain a section regarding wind generation activities. It is meant as the first step in developing the proposed amendment

Attachments:
Draft amendment to Zoning Ordinance - Alternative Energy Generation Facility

Recommendations:

Review the draft amendment and be prepared to discuss at the November 19, 2019 meeting of the Planning Commission

Motion _____	Paige _____	Hunt _____	Jones _____
Second _____	Sandlin _____	Gilliam _____	Watson _____
Prengaman _____	Jenkins _____	Leatherwood_____	Peery _____

ARTICLE V.II. ALTERNATIVE ENERGY FACILITIES

Sec. 53-153 – Purpose and intent.

'The intent of this ordinance is to provide for and regulate the siting, installation, operation and decommissioning of alternative energy, or "green energy," sources in Prince Edward County in a manner that promotes safe, effective and efficient use of such facilities while protecting the safety and welfare of the community. The intent is to encourage alternative energy sources while limiting negative impacts on natural resources, including pollinator and wildlife habitats, and existing agricultural, forestal, residential, commercial, industrial, historical and recreational uses of property or the future development of property in the County. This ordinance is to provide guidance on how "green energy" may be implemented/utilized in this community. This article does not supersede or nullify any provision of local, state, or federal law that applies to alternative energy generation facilities.

Sec. 53-154 – Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant. The person or entity who submits an application to the county for a zoning permit or special use permit, as the case may be, to site, develop, construct, install, and operate an alternative generation facility under this article.

Facility owner. The person or entity that owns all or a portion of the alternative energy facility, whether or not it owns the site on which the facility is located.

Integrated PV. Photovoltaics incorporated into building materials, such as shingles.

Large scale energy facility. An alternative energy facility that has a maximum power of not more than 999 kW. Large energy systems are generally used to reduce onsite consumption of utility power for commercial and industrial applications.

Operator. The person or entity responsible for the overall operation and management of the solar energy facility, if different than the facility owner.

Photovoltaic or *PV.* Materials and devices that absorb sunlight and convert it directly into electricity.

Previously disturbed. Any area of a site that has undergone mechanical land-forming, construction, or demolition activities within the past 50 years.

Project area. The area within a site used for the construction and operation of the energy facility.

Rated capacity. The maximum capacity of a solar energy facility based on the sum total of each photovoltaic system's nameplate capacity or wind generation turbine.

Residential scale energy facility. A facility that (1) utilizes generation equipment that is mounted on or over a building, grassy area or other previously disturbed area, and (2) has a rated capacity of 10kw or less.

Site. The property containing an energy facility.

Site owner. The person or entity that owns all or a portion of the site, if different than the facility owner.

Small scale energy facility. An energy facility that: (1) has a project area of one acre or less; (2) has a rated capacity of 200 kw or less; (3) is mounted on or over a building, parking lot, or other previously disturbed area; (4) is normally used to reduce onsite consumption of energy for small scale operations such as small agricultural or commercial operations.

Utility scale energy facility. An energy facility which has a rated capacity of one megawatt (1 MW) or greater. Utility Scale Energy Systems are generally used to provide electricity to a utility provider.

Sec. 53-155 – Applicability; permitting.

The requirements set forth in this article shall govern the siting, development, construction, installation, operation, and decommissioning of alternative energy facilities in the county. A special use permit is required for each such facility proposed to be constructed, installed, or operated in the county except for residential scaled facility. A zoning permit is required for each residential scale energy facility proposed to be constructed, installed, or operated in the county. Use regulations for specific zoning classifications will state if alternative energy facilities are permitted in a particular zoning district as a matter of right or require a special use permit.

Sec. 53-156 – Applications, procedures and requirements for residential and small-scale energy facilities.

For proposed residential and small-scale energy facilities, the applicant shall submit a project narrative and site plan that comply with subsections (a) and (b) in Section 53-157. The signage, noise, and lighting requirements in Section 53-156 shall apply to all residential and small-scale energy facilities. The fencing requirement and the height restriction in Section 53-156 shall apply to all ground-mounted residential and small-scale energy facilities. The setback, vegetative buffering, and pollinator habitats requirements in Section 53-158 shall apply to all residential and small-scale energy facilities in the A-1 district. Small scale energy facilities are required to have a decommissioning plan and security that comply with Subsection (d) of Section 53-157. The zoning administrator may require additional information from the applicant to determine whether the facility meets these requirements and qualifies as a matter of right as a small-scale energy facility.

Sec. 53-157 – Applications and procedures for large and utility scale energy facilities.

In addition to materials required for a special use permit application, applications for large and utility scale energy facilities shall, unless otherwise provided herein, include the following information:

a) *Project narrative.* A narrative identifying the applicant, facility owner, site owner, and operator, if known at the time of the application, and describing the proposed energy facility, including an overview of the project and its location; the size of the site and the project area; the current use of the site; the estimated time for construction and proposed date for commencement of operations; the planned maximum-rated capacity of the facility; the approximate number, representative types and expected footprint of the equipment to be constructed, including without limitation photovoltaic panels; towers for wind powered generation equipment; any ancillary facilities, if applicable; and how and where the electricity generated at the facility will be transmitted, including the location of the proposed electric grid interconnection.

b) *Site plan.* The site plan shall include the following information:

1) Property lines, minimum required setback lines under this article, and any proposed setback lines that exceed the minimum requirements.

2) Existing and proposed buildings and structures, including preliminary location(s) of the proposed equipment.

3) Existing and proposed access roads, permanent entrances, temporary construction entrances, drives, turnout locations, and parking, including written confirmation from the Virginia Department of Transportation ("VDOT") that all entrances satisfy applicable VDOT requirements; provided, however, these requirements shall not exceed VDOT requirements for other types of projects in the underlying zoning district.

4) Proposed locations and maximum heights of substations, electrical cabling from the generation systems to the substations, panels, ancillary equipment and facilities, buildings, and structures (including those within any applicable setbacks).

5) Fencing as required under this article and other methods of ensuring public safety.

6) Areas where the vegetative buffering required in this article will be installed and maintained and areas where pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers required in this article will be installed and maintained.

7) Existing wetlands, woodlands and areas containing substantial woods or vegetation.

8) Identification of recently cultivated lands and predominant soil types (based on publicly available data) of those lands.

9) Additional information may be required, as determined by the zoning administrator, such as a scaled elevation view and other supporting drawings, photographs of the proposed site, photo or other realistic simulations or modeling of the proposed energy project from potentially sensitive locations as deemed necessary by the zoning administrator to assess the visual impact of the project, aerial image or map of the site, and additional information that may be necessary for a technical review of the proposal. The planning commission or board of supervisors may require other relevant information deemed to be necessary to evaluate the application.

c) *Documentation of right to use property for the proposed facility.* Documentation shall include proof of control over the proposed site or possession of the right to use the proposed site in the manner requested. The applicant may redact sensitive financial or confidential information.

d) *Decommissioning plan; security.*

1) The applicant shall provide a detailed decommissioning plan that provides procedures and requirements for removal of all parts of the energy generation facility and its various structures at the end of the useful life of the facility or if it is deemed abandoned pursuant to Section 53-160. The plan shall include the anticipated life of the facility, the estimated overall

cost of decommissioning the facility in current dollars, the methodology for determining such estimate, and the manner in which the project will be decommissioned. The decommissioning plan and the estimated decommissioning cost will be updated upon the request of the zoning administrator, provided the update shall be no more frequently than once every five years and no less frequently than once every ten years.

2) Prior to operation, the applicant must provide security in the amount of the estimated cost of the decommissioning. Options for security include a cash escrow, a performance surety bond, a certified check, an irrevocable letter of credit, or other security acceptable to the county in an amount equal to the estimated decommissioning cost developed and updated in accordance with the decommissioning plan acceptable to the county. The security must remain valid until the decommissioning obligations have been met. The security may be adjusted up or down by the county if the estimated cost of decommissioning the facility changes. The security must be renewed or replaced if necessary to account for any changes in the total estimated overall decommissioning cost in accordance with the periodic updated estimates required by the decommissioning plan. Obtaining and maintaining the requisite security will be a mandatory condition of the special use permit. The security shall be in favor of the county and shall be obtained and delivered to the county before any construction commences.
3) The decommissioning plan, cost estimates, and all updates of those plans and estimates shall be sealed by a professional engineer.

e) *Liability insurance.* The applicant shall propose a reasonable amount of liability insurance that the applicant deems adequate to cover operations at the large and utility scale energy facility prior to the issuance of a building permit. Obtaining and maintaining the requisite liability insurance will be a mandatory condition of the special use permit.

f) *Landscaping and screening plan.* The applicant must submit a landscaping and screening plan that addresses the vegetative buffering required in this article, including the use of existing and newly installed vegetation to screen the facility. The plan also must address the use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the project area and in the setbacks and vegetative buffering as required in this article.

g) *Erosion and sediment control plan.* An erosion and sediment control plan must be approved prior to any land disturbing activity.

h) *Stormwater management plan.* A stormwater management plan must be approved by prior to any land disturbing activity exceeding one acre.

i) *Virginia Cultural Resource Information System report.* A report by the Virginia Department of Historic Resources Virginia Cultural Resource Information System must be submitted to identify historical, architectural, archeological, or other cultural resources on or near the proposed facility.

j) *Additional information.* If deemed relevant to the consideration of a special use permit application or the conditions to be included in any special use permit, the zoning administrator, planning commission or board of supervisors may require the applicant to submit any of the following information, either as part of the special use permit application or as a condition of any special use permit:

1) As a condition of the special use permit, the applicant will be required to submit a construction plan, including a proposed construction schedule and hours of operation, before obtaining a building permit.
2) The identification and location of any existing large or utility scale energy facilities and any known proposed large or utility scale energy facilities within a five-mile radius of the proposed site.
3) A report of impact on adjacent property values prepared by a qualified third-party, such as a licensed real estate appraiser.
4) An economic impact analysis prepared by a qualified third-party that reports any expected change in the value of the subject property, expected employment during the construction of the facility, any expected impact on the county's tax revenues, the estimated costs to the county associated with the facility in the form of additional services, and the information on any our economic benefits or burdens from the facility that may be requested by the zoning administrator.
5) A copy of the cultural resources review conducted in conjunction with the state department of historic resources for the permit by rule process shall be submitted by the applicant prior to the issuance of a building permit. This report shall be in addition to the report required in subsection (j)(1) and shall further identify historical, architectural, archeological, or other cultural resources on or near the proposed facility.
6) A report on the potential impacts on wildlife and wildlife habitats at the site and within a two-mile radius of the proposed facility using information provided by the state department of game and inland fisheries or a report prepared by a qualified third-party.
7) A report on potential impacts on pollinators and pollinator habitats at the site, including but not necessarily limited to the submission of a completed site pollinator habitat assessment form as required by the zoning administrator.
8) A glint and glare study that demonstrates either that the panels will be sited, designed, and installed to eliminate glint and glare effects on roadway users, nearby residences, commercial areas, and other sensitive viewing locations, or that the applicant will use all reasonably available mitigation techniques to reduce glint and glare to the lowest achievable levels. The study will assess and quantify potential glint and glare effects and address the potential health, safety, and visual impacts associated with glint and glare. Any such assessment must be conducted by qualified individuals using appropriate and commonly accepted software and procedures.

k) *Review fees.* The county may retain qualified third-parties to review portions of a permit application that are outside the county's areas of expertise and do not have adequate state and federal review. Any out-of-pocket costs incurred by the county for such review by qualified third-parties shall be paid by applicant. The third-party reviewers and their estimated costs will be submitted to applicant for approval before the costs incurred. The county may, in the alternative, accept such review by qualified third-parties selected, retained and paid by the applicant.

l) *Community meeting.* A public meeting shall be held prior to the public hearing with the planning commission to give the community an opportunity to hear from the applicant and ask questions regarding the proposed facility. The meeting shall adhere to the following:
1) The applicant shall inform the zoning administrator and adjacent property owners in writing of the date, time and location of the meeting, at least seven but no more than 14 days, in advance of the meeting date;

2) The date, time and location of the meeting shall be advertised in a newspaper of record in the county by the applicant, at least seven but no more than 14 days, in advance of the meeting date;
3) The meeting shall be held within the county, at a location open to the general public with adequate parking and seating facilities that will accommodate persons with disabilities;
4) The meeting shall give members of the public the opportunity to review application materials, ask questions of the applicant and provide feedback; and
5) The applicant shall provide to the zoning administrator with a summary of any input received from members of the public at the meeting.

m) *Exemptions*. The zoning administrator may exempt applications for facilities smaller than four acres with a rated capacity equal to or less than two megawatt (MW) from some of the requirements of this section; provided, however, the zoning administrator may not exempt applications from any of the requirements concerning buffering and density.

n) *Post-application documentation and approvals.* All documentation required to be submitted to and approvals required from the county after the issuance of the permit shall, unless otherwise stated in the conditions attached to the special use permit, be submitted or obtained no later than the date of any application for a building permit for the facility. The failure or refusal to submit required documentation or obtain required approvals following the issuance of a special use permit shall result in the suspension of the special use permit and the denial of the building permit.

Sec. 53-158 – Location, appearance, and operational requirements.

The following requirements apply to large and utility scale energy facilities:

a) *Visual impacts*. The applicant shall demonstrate through project siting and proposed mitigation, if necessary, that the project minimizes impacts on viewsheds, including from residential areas and areas of scenic, historical, cultural, archaeological, and recreational significance. The facility shall utilize only panels that employ anti-glare technology, anti-reflective coatings, and other available mitigation techniques, all that meet or exceed industry standards, to reduce glint and glare. The applicant shall provide written certification from a qualified expert acceptable to the county that the facility's panels incorporate and utilize anti-glare technology and anti-reflective coatings and reduce glint and glare to levels that meet or exceed industry standards.

b) *Signage.* All signage on the site shall comply with the county sign ordinance, as adopted and from time to time amended. Appropriate warning signage and a 911 address sign shall be posted in a clearly visible manner. Warning signage must identify the owner and include a 24-hour emergency contact phone number.

c) *Noise.* Noise levels from the facility at the property line shall not exceed 50 dB.

d) *Setbacks.* The project area shall be set back a distance of at least 75 feet from all public rights-of-way and main buildings on adjoining parcels, and a distance of at least 50 feet from adjacent property lines. Exceptions may be made for adjoining parcels that are owned by the applicant.

Increased setbacks up to 100 feet and additional buffering may be included in the conditions for a particular permit. Energy facilities also shall meet all setback requirements for primary structures for the zoning district in which the facility is located in addition to the requirements set forth above. Access, erosion and stormwater structures, and interconnection to the electrical grid may be made through setback areas provided that such are generally perpendicular to the property line.

e) *Fencing.* The project area shall be enclosed by security fencing not less than six feet in height and equipped with an appropriate anti-climbing device such as strands of barbed wire on top of the fence. The height and/or location of the fence may be altered in the conditions for a particular permit. 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 maintained at all time while the facility is in operation.

f) *Vegetative buffer.* A vegetative buffer sufficient to mitigate the visual impact of the facility is required. The buffer shall consist of a landscaped strip at least 15 feet wide, shall be located within the setbacks required under subsection (d), and shall run around the entire perimeter of the property. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a special use permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight feet within three years. The planning commission or board of supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility. Noninvasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. A recommendation that the screening and/or buffer creation requirement be waived or altered may be made by the planning commission when the applicant proposes to use existing wetlands or woodlands, as long as the wetlands or woodlands are permanently protected for use as a buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer shall be maintained for the life of the facility.

g) *Pollinator habitats.* The project area will be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers. The project area will be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operator also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the setbacks and vegetative buffering.

h) *Height.* Ground-mounted solar energy generation facilities shall not exceed a height of 20 feet, which shall be measured from the highest natural grade below each solar panel. This limit shall not apply to utility poles and the interconnection to the overhead electric utility grid. Roof mounted systems shall not exceed the maximum height requirements for the applicable zoning district by more than four feet.

i) *Lighting.* Lighting shall be limited to the minimum reasonably necessary for security purposes and shall be designed to minimize off-site effects. Lighting on the site shall comply with any dark skies ordinance the board of supervisors may adopt or, from time to time, amend.

j) *Density; location.* Large and utility scale energy facilities shall not be located within one mile of an airport unless the applicant submits, as part of its application, written certification from the Federal Aviation Administration that the location of the facility poses no hazard for, and will not interfere with, airport operations. No large or utility scale generation facility shall be located within one mile of the villages of Rice, Green Bay, Prospect or the Towns of Farmville and Pamplin. In addition, no more than two and one-half percent of the land in a five-mile radius of the project area of any existing large or utility scale energy facility shall be approved for use as the project area for a new large or utility scale energy facility.

k) *Utility Connection.* No large or utility scale generation system shall be installed until evidence has been provided to the County that the owner has been approved by the appropriate electrical provider to interconnect.

l) *Repair of facility.* Solar panels and windmill equipment shall be repaired or replaced when in visible disrepair. Such repairs include the restoration of non-reflective finish per manufacturer specifications.

m) *Entry and inspection.* The owners and/or operator will allow designated county officials access to the facility for inspection purposes, provided such inspectors will be subject to the owners' and/or operator's safety requirements and protocols while within the facility.

Sec. 53-159 – Additional considerations for conditions.

To preserve and protect county view sheds and resources, to protect the health, safety and welfare of the community, and to otherwise advance the purpose and intent of this article, the following non-exhaustive list of additional criteria may be considered by the planning commission and the board of supervisors in addressing whether to recommend or grant a permit, and what conditions to impose on any permit for an energy generation facility:

a) The topography of the site and the surrounding area.
b) The proximity of the site to, observability from, and impact on urban and residential areas.
c) The proximity of the site to other energy facilities and utility transmission lines.
d) The proximity of the site, observability from and impact on areas of scenic significance and of historical, cultural and archaeological significance.
e) The proximity of the site, observability from and impact on public rights of way to include all roads, recreational and state facilities.
f) The preservation and protection of wildlife and pollinator habitats and corridors.
g) The size of the site.
h) The proposed use of available technology, coatings and other measures for mitigating adverse impacts of the facility.
i) The preservation and protections of prime farmland and forestal land in the county, provided that:

1. "Prime farmland" shall have the meaning assigned to it by the Natural Resource Conservation Service of the United States Department of Agriculture.
2. If no more than ten percent of the site is prime farmland, this consideration will be waived.

The enumeration of these criteria shall not prohibit the planning commission or the board of supervisors from considering other factors deemed relevant to a specific special use permit applicant based on the details of the application. Nothing herein shall limit in any manner the nature and scope of reasonable conditions that may be recommended by the planning commission or imposed by the board of supervisors.

Sec. 53-160 – Unsafe or abandoned projects; decommissioning.

a) If an energy facility has been determined to be unsafe by the County building official, the facility shall be required to be repaired by the facility owner, site owner, or operator to meet federal, state, and local safety standards, or to be removed by the owners or operator. The owners or operator must complete the repair or removal of the facility, as directed by the building official, within the time period allowed by the building official. If directed to do so by the building official, the owners or operator will remove the energy facility in compliance with the decommissioning plan established for the facility.
b) If any energy generation facility is not operated for a continuous period of 12 months, the county may notify the facility owner by registered mail and provide 45 days for a response. In its response, the facility owner shall set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If the county deems the timetable for corrective action unreasonable, it may notify the facility owner, and the facility owner shall ensure removal of the facility in compliance with the decommissioning plan established for the facility.
c) At such time as an energy facility is scheduled to be abandoned or cease operation, the facility owner shall ensure the zoning administrator is notified in writing.
d) Within 365 days of the date of abandonment or non-operation, whether as declared by the county under subsection (b) or as scheduled by the owners or operator under subsection (c), the facility owner shall ensure the physical removal of the energy facility in compliance with the decommissioning plan established for such facility. This period may be extended at the request of the owners upon approval of the board of supervisors.
e) When the facility owner, site owner, operator or other responsible parties decommission an energy facility, he shall handle and dispose of the equipment and other facility components in conformance with federal, state and local requirements. All equipment both above and below ground must be removed as part of the decommissioning plan. This shall include but not be limited to above and below ground tanks, cables, fencing, debris, structures or equipment to include foundations and pads and the restoration of the land and related disturbed areas to a natural condition or other approved state.
f) "Natural condition" shall mean the stabilization of soil to a depth of 3 feet and restoration of site vegetation and topography to pre-existing condition, provided that the exact method and final site restoration plan shall be subject to site plan review and approval giving, among other items, consideration to impact upon future site use, environmental and adjacent property impacts. The zoning administrator may approve a request by the landowner to allow internal paths, roads, travel ways, landscaping, pads or other items which will serve a future permitted site use to remain. Where applicable, if the zoning administrator determines the restoration plan

significantly deviates from the description and conditions approved by the Board such plan shall require amendment of conditions through the zoning process.

g) If the facility owner, site owner, or operator fails to remove or repair any unsafe abandoned or non-operating energy facility after written notice, the county may pursue legal action to have the facility removed at the expense of the facility owner, site owner or operator, each of whom shall be jointly and severally liable for the expense of removing or repairing the facility. The county may call upon the decommissioning security to remove the facility.