

Spotsylvania County Planning Commission

DRAFT

Met at the Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553
Traveled to Louisa Extension Meeting Room, 1 Woolfolk Avenue, Louisa VA 23093
Traveled to the Whitehall Site at 495 Chalklevel Road, Louisa VA 23093

MINUTES: May 9, 2018

Call to Order: Mr. Newhouse called the meeting to order at 8:10 a.m.

Members Present:	Richard Thompson	Courtland
	Michael Medina	Salem
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Mary Lee Carter	Lee Hill

Spotsylvania Staff Present: Wanda Parrish, AICP, Director of Planning
Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Assistant Director of Planning
Patrick White, Planner III
Alexandra Spaulding, Senior Assistant County Attorney
Richard Street, Environmental Engineer
Greg and Brayden Benton, Livingston Board Member & Son

Others Present: Holly Reynolds, Louisa County Planning Commissioner
Sarah Perkinson, Dominion Energy
Jason De La Cruz, Dominion Energy
George Goodwin, Louisa County Planning Commissioner
Thomas Egeland, Louisa County Economic Development Director
Kris Nelson, Louisa County E&S Inspector
Linda Buckler, Deputy Zoning Administrator
Renee Mawyer, Administrative Assistant
Robert Gardner, Director of Planning
Paul Snyder, Building Office

Mr. Newhouse stated that the special meeting will reconvene once we are all together in Louisa. He reminded the Commission that if there are three PC members in a vehicle, business cannot be conducted or discussed.

Once the Commission arrived in Louisa Mr. Newhouse reconvened the meeting. Spotsylvania and Louisa county representatives introduced themselves.

Ms. Parrish brought everyone up to speed pertaining to the three special use applications by sPower for solar energy facilities. The SCC hearings are being held today. She stated that they

are located in a rural area and adjacent to a large community called Fawn Lake. She stated that we are trying to become more educated about solar as we work through the review.

The Louisa county Economic Development Director stated that the facility located in their county was an initiative by Dominion Energy. He stated that they are the first in the state under Dominion's program. He described the proactive approach as a seamless transaction on Louisa's part.

Mr. Smith inquired how large of facility Whitehall is and how many megawatts.

The Economic Development Director stated that the Whitehall facility is 248 acres and 20mw.

Ms. Carter inquired what Louisa would say are the positives of the facility.

He stated that it's a great marketing approach when trying to lure companies and that it is located in the center of the county and served by Dominion's distribution network.

Mr. Thompson stated the proposal for Spotsylvania County is 3800 acres.

The Louisa County Planning Director stated that it's important to maintain and increase communication with the public as the County moves through the process. He stated that Dominion did a lot of buffering around the property.

Ms. Perkinson stated that the buffer is 75 feet and that is Dominion's standard.

Mr. Thompson inquired how old the facility is.

Ms. Perkinson stated that the facility went into commission in 2016. She also stated that the devil is in the details and it's important to discuss the buffer at the onset.

There was discussion regarding Spotsylvania's approval of an ordinance allowing these types of facilities.

Ms. Parrish described the nuances of the County's developed ordinance such as viewshed, decommissioning, etc.

A representative for Louisa mentioned that the construction traffic will be of concern and that the pile driving of the posts will cause some noise. After constructed the facility itself creates very little noise or traffic.

Ms. Perkinson stated that the ground work is done, pile driving, and attaching of solar panels. Once built, the only noise that occurs is the clicking as the solar panels move with the sun. It sounds similar to a watch ticking. The noise comes as they track on their rod.

Mr. Thompson inquired how long it took to complete the building of the facility.

Ms. Perkinson stated that they began construction in mid-July to mid-December. The timeline took longer than anticipated because historic artifacts were located on site and it slowed development.

Ms. Spaulding inquired about maintenance and water usage since that has been the primary concern of some citizens in Spotsylvania.

The Louisa representative stated that the primary maintenance that occurs is grass cutting. There was discussion that facilities on the east coast don't have to clean the solar panels because of all the rain and snow. Every two years, they budget money for cleaning the panels in Louisa and they don't expect to have to clean them.

There was discussion about animals getting into the facility.

The Louisa representatives stated that there is a 6 foot tall security fence and to date there has been no damage due to animals.

Mr. Smith inquired about the water used to clean the panels.

They stated that to date they haven't had to clean them and don't expect to but just to be on the safe side, they budget money for them to be cleaned every two years. No wells have been used and no municipal water has been used.

Ms. Maddox stated that some citizens are concerned about cadmium and if there was a break.

Ms. Perkinson stated that to date, there have been no breaks and no Fire/Rescue calls to the facility.

Mr. Newhouse inquired about the life cycle of the panels and facilities.

Ms. Perkinson stated that the lifespan is 20-30 years.

Mr. Newhouse inquired about the decommissioning of the Whitehall facility.

Ms. Perkinson stated that they have to return the land back into farm or timber land.

Mr. Newhouse inquired if they have experienced any detriment to property values.

A Louisa Commission member stated that there is no data suggesting any detriment to property values to date.

Ms. Perkinson stated that Dominion's longest running facility is four years old and they haven't noticed any off trend increase or decrease in values.

There was discussion about impacts and whether there has been any public outcry and Louisa stated that they haven't received any complaints to date.

Also discussed were erosion and sediment controls and that there were a few lessons learned.

Ms. Perkinson stated that the development should occur in sections, plant the necessary grass and then go to the next section.

Mr. Thompson inquired about the tax rate for Whitehall.

Whitehall is tax exempt and the state allows for this exemption.

There was discussion about whether there is a benefit to customers in terms of electric rates.

Ms. Perkinson stated no.

Ms. Carter inquired if they had to clear and burn the debris.

Ms. Perkinson stated that the Powhatan and Buckingham sites had already been cleared. The area cleared in Louisa was mulched to reinforce erosion controls.

Mr. Newhouse inquired about the construction and whether local contractors were used.

Ms. Perkinson stated that the work was done by a local contractor and job fairs were held.

Mr. Newhouse inquired about those pay rates.

Ms. Perkinson stated that she can get that information.

Mr. Newhouse stated that he would like to see local people used and that they can be trained to do the work.

Mr. Newhouse inquired about lessons learned.

The building office representative stated that from a building standpoint it was very simple. They stated that they primarily inspected the site temporary trailers and once the project is finished, they disappear. Much of the solar panels are exempt from the building code.

Mr. Thompson inquired about the length of the lease at Whitehall.

Ms. Perkinson stated that the lease is for 30 years.

There was discussion about whether Dominion would renew the lease.

Ms. Perkinson stated that with upgrades in technology.

Ms. Carter inquired what are the positives or benefits of solar farms.

Ms. Perkinson stated that it's created green renewable energy with less reliability on fossil fuels.

Mr. Medina stated that the number one goal should be to maintain the rural character of the property.

Mr. Goodwin, rep from Louisa County Planning Commission stated that there is very minimal impact on property values, there is no demand for county services, and you don't even know it's there.

Ms. Carter inquired if there is a savings for customers.

Ms. Perkinson stated that they look at their customers as a whole and they don't charge less for people using solar energy. As far as noise at the Powhatan location, the only complaints they've received were construction noise.

Ms. Spaulding inquired if they've been able to calculate a return on their investment.

Ms. Perkinson stated that they've determined that the return would occur within the 5-10 year range and it also depends on how well the sun shines.

Mr. Medina inquired if there are incentives for solar energy vs. fossil fuels.

Ms. Perkinson stated that they do receive a tax break.

There was discussion regarding Microsoft stating that they will buy half of the power supplied by the proposed solar facility.

There was also discussion that Amazon uses 20 MW of solar energy from the Dominion facilities.

Ms. Perkinson stated that it's great that they are able to say that they are renewable energy friendly, completely clean power, and not adding to the carbon emissions. It also has no impact on county services. It's important for people to remember that if not this type of development, what it could be.

Mr. Thompson stated that the houses and development are going to come anyway; they would just go somewhere else.

Mr. Medina stated that the proposed property is not in the primary settlement district so the development of homes would be served by wells and septic.

Discussion ensued about the idea of a "heat dome" created by solar facilities and the adjacent citizens requesting buffers.

Ms. Perkinson stated that she is unaware of the heat dome effect and that they are silica based glass and are made to absorb for better output. If you were to touch the panels they are not hot, they are warm to the touch, and there is no increase in temperature.

Mr. De LaCruz from Dominion Energy stated that as they developed the Whitehall facility, they discussed the buffer to use fencing. Instead of fencing, shrubs, trees, fence, and then trees could be suggested.

There was discussion that the oldest Dominion Energy Solar facility is four years old and located in Georgia. Also discussed was that as the panels age, they lose a quarter to half MW each year of power.

Discussion regarding that the peak time of noise occurs only when driving the pilings into the ground. Ms. Perkinson stated that it goes fairly quickly.

Mr. Smith inquired how many machines are used for the pile driving.

Ms. Perkinson stated that she could find out but that 15,000 to 18,000 can be done in one day. She also described it more as a post driver.

Mr. Bullock stated that he understood that it took 6 months to construct the facility on 248 acres. He inquired how long they believe it would take for sPower to develop thousands of acres.

Ms. Perkinson stated that she cannot answer that; the applicant should be able to answer his question.

Mr. Newhouse inquired about broken or damaged panels.

Ms. Perkinson stated that staff is trained to handle that and that they have contracted a company to operate the site and they manage those repairs, among other duties.

Ms. Parrish inquired if the panel, if broken, stays intact.

Ms. Perkinson stated that the glass can shatter but would not shatter out of the panel, it would stay intact.

There was discussion about the roadway and the trucks coming in and out of the facility, whether they damaged the roadways.

The ED director stated that there is more damage that occurs to the roadway from the land being logged.

There was discussion about the outreach to local schools regarding STEM.

Ms. Perkinson stated that she has become known as tour guide Sarah because of the tours that are requested. She stated that in May alone she has 6 tours scheduled with schools, Dominion Energy employees, localities with interest, etc.

There was discussion about building permits required and that they are exempt from building permits because they are a state utility. There was discussion that it really is no different than

putting up a light fixture.

Mr. Bullock inquired if Spotsylvania is on Dominion Energy's radar for a facility.

Ms. Perkinson stated that she is not aware.

Spotsylvania staff and commission members thanked the Louisa County participants for hosting the meeting.

The meeting recessed at 10:30 to allow travel to the Whitehall facility.

At approximately 11 a.m. the tour of the facility began. Mr. Newhouse reconvened the meeting.

Info sheets were provided with facts pertaining to the Whitehall site.

Mr. White inquired if the panels track every hour or more like every five minutes.

The tour guide stated that it depends on the time of year. He showed how the cables are run to the combiner box.

There was a question regarding how many full-time employees are on site.

There are no full-time employees on site.

Discussion ensued regarding how frequently the grass is maintained.

Grass maintenance occurs when the grass is anywhere from 24 to 36 inches tall as long as it doesn't interfere with the movement of the panels.

Ms. Parrish inquired about how stormwater is managed.

There are several ponds on site to control runoff.

There was discussion about the decommissioning of the facility.

The land will be returned to previous condition.

There was discussion about whether there is such a thing as "heat dome effect."

Ms. Perkinson stated that the site backs up to the Southern States that was passed on the way to the site. They have had no complaints about heat coming from the site. The energy is directly used; there is not a lot of storage that is occurring because energy storage is expensive.

Discussion occurred regarding the washing of the panels.

The tour guide stated that panels do not have to be washed on the east coast because the snow

and rain take care of that.

The largest challenge is getting grass to grow when the facility is started.

Mr. Medina inquired if there are mosquito issues with the stormwater ponds.

Rich from Dominion Energy stated that he is not aware of mosquito issues on site but they do not have stagnant water.

There was discussion about talking to DCR about native plant seeds that can be used together so that the grass doesn't get taller than four feet tall. Some of them can help with erosion controls.

Also discussed was whether any facilities were under construction so that they could hear the sound of the pile driving. Tour participants discussed that there are work times that they would have to comply with.

They discussed the buffer on site. Dominion Energy advised that the buffer was left as is and that the larger trees remained.

Spotsylvania thanked Dominion for their time and the tour.

New Business

Ms. Parrish advised that the second meeting of May will be canceled. Also, staff has received a FOIA request regarding sPower correspondence to Commission members. She asked that the Commissioners review their email inbox for email to them pertaining to sPower and forward to Ms. Mann.

Public Comment: None

Motion to adjourn:

Mr. Newhouse reminded the Commissioners not to discuss business as they travel back to Spotsylvania. The meeting adjourned at approximately 12:30 on a motion by Mr. Smith, seconded by Ms. Carter. The motion passed 7-0.

Paulette Mann

Date

Wanda Parrish

From: Sarah A Perkinson <Sarah.A.Perkinson@dominionenergy.com>
Sent: Tuesday, May 22, 2018 9:31 PM
To: Wanda Parrish
Cc: Jason De La Cruz; Charles Donato
Subject: Follow-up to Whitehouse Solar Tour
Attachments: US-MKT-320P-4BB.PDF

Wanda-

Below are the follow-up answers from questions asked during the meeting and Whitehouse Solar tour that could not be immediately answered. I have also attached information regarding the panels used at Whitehouse.

Would you be able to send these to the Spotsylvania participants?

Thank you, and thank you again for touring our facility.

- How much water did we use during construction?
 - We used no water during construction, other than for employee use (faucets, restrooms, etc.) in our trailers.
- For the decommissioning of our solar farms, what will be done with the panels/materials (will we recycle)? Also, what are the estimated costs for decommissioning Whitehouse and how was this cost determined?
 - The equipment on site will be recycled in the best way at the time of decommissioning. No information on this cost at this time.
- Post clearing, what did we do with the stumps that were cleared?
 - No knowledge of how the stumps were disposed of prior to construction for Whitehouse.
- What were the average pay rates for the workers who assisted with the construction of Whitehouse?
 - Contractor pay rates were determined by the contractor, not Dominion Energy, the rate is unknown by Dominion Energy.
- What, if any, are the current tax credits and/or rebates for construction of solar facilities?
 - Tax credits for Solar Projects are public knowledge, please see the IRS website for details as tax laws can change at any time.
- What is the location of our solar facility in Georgia?
 - The Azalea Solar Power Facility (7.7MW) is located in Washington County, GA (approximately 60 miles southwest of Augusta, GA). This facility entered service in late 2013 and has a 25-year power purchase agreement with Cobb Electric Membership Corp.
- How many machines was in-use at our peak construction time for Whitehouse? (Specifically for the pile-driving)
 - Pile driving is performed very quickly in the field and is usually performed with one to four machines on a site of the size of Whitehouse.
- Do our panels include cadmium?
 - Our panels do not contain cadmium, but different panels use different technologies.
- If the panels are damaged and chemicals are released, what is the protocol for cleanup?
 - Panels are a solid state, and chemicals would not be released.

Sarah A. Perkinson
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JKM320P-72

300-320 Watt

POLY CRYSTALLINE MODULE

Positive power tolerance of 0/+3%

ISO9001:2008 · ISO14001:2004 · OHSAS18001
certified factory.

UL1703 certified products
(North America Market Use Only)



KEY FEATURES



Innovative Solar Cells

Four bus-bar cell technology provides a more robust and powerful module ideal for utility scale applications



Higher Module Efficiency

Polycrystalline 72-cell module with power output available to 320W (16.49% conversion efficiency)



Low-Light Performance

Improved low light performance through advancements in glass technology and surface texturing



Strong and Durable

Tested and tried to endure up to 5400Pa positive and 2400Pa negative loads



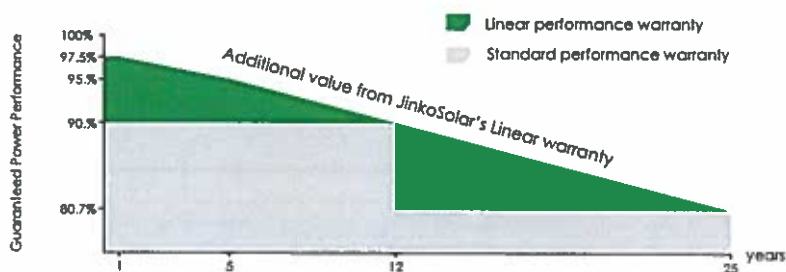
Weather Resistance

Certified by TUV for high salt mist and ammonia resistance

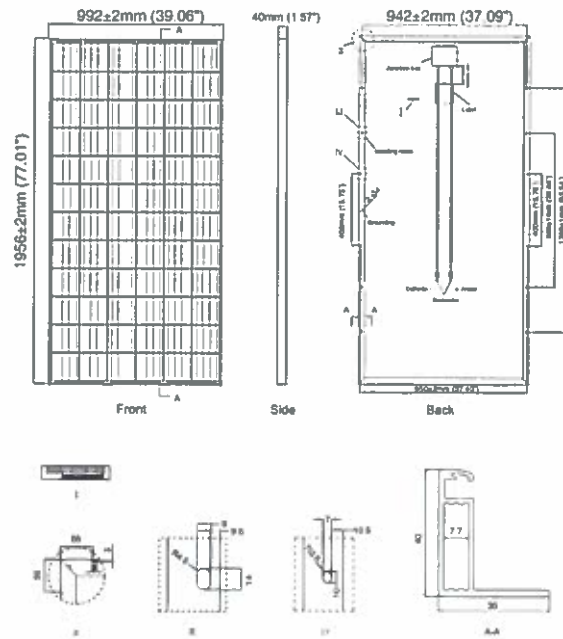


LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty • 25 Year Linear Power Warranty



Engineering Drawings

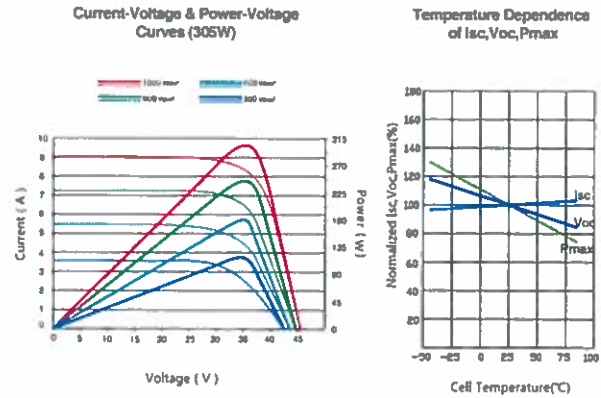


Packaging Configuration

(Two boxes =One pallet)

25pcs/ box, 50pcs/pallet, 600 pcs/40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	Poly-crystalline 156×156mm (6 inch)
No. of cells	72 (6×12)
Dimensions	1956×992×40mm (77.01×39.06×1.57 inch)
Weight	26.5 kg (58.4 lbs.)
Front Glass	4.0mm, High Transmission, Low Iron, AR Coating Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	12 AWG, Length:1200mm (47.24 inch)
Fire Type	Type 1

SPECIFICATIONS

Module Type	JKM300P		JKM305P		JKM310P		JKM315P		JKM320P	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	300Wp	221Wp	305Wp	225Wp	310Wp	230Wp	315Wp	233Wp	320Wp	237Wp
Maximum Power Voltage (Vmp)	38.8V	33.7V	38.8V	34.0V	37.0V	34.4V	37.2V	34.7V	37.4V	34.7V
Maximum Power Current (Imp)	8.20A	6.58A	8.30A	6.62A	8.38A	6.68A	8.48A	6.71A	8.58A	6.83A
Open-circuit Voltage (Voc)	45.3V	42.3V	45.6V	42.4V	45.9V	42.7V	46.2V	42.8V	46.4V	43.0V
Short-circuit Current (Isc)	8.84A	7.16A	8.91A	7.21A	8.96A	7.26A	9.01A	7.28A	9.05A	7.35A
Module Efficiency STC (%)	15.46%		15.72%		15.98%		16.23%		16.49%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000VDC (UL)									
Maximum series fuse rating	15A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.41%/°C									
Temperature coefficients of Voc	-0.31%/°C									
Temperature coefficients of Isc	0.06%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									

STC: Irradiance 1000W/m² Cell Temperature 25°C AM=1.5

NOCT: Irradiance 800W/m² Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

* Power measurement tolerance: ± 3%

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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