**Albemarle County Planning Commission**
**Final Minutes Work Session and Regular Meeting November 26, 2024**

The Albemarle County Planning Commission held a public hearing on Tuesday, November 26, 2024 at 4:00 p.m.

Members attending were: Fred Missel, Chair (absent from 6:00 p.m. meeting); Luis Carrazana, Vice-Chair; Corey Clayborne; Karen Firehock; and Lonnie Murray

Members absent: Julian Bivins; Nathan Moore

Other officials present were: Michael Barnes, Director of Planning; Andy Herrick, County Attorney's Office; Scott Clark, Conservation Program Manager; Khris Taggart, Senior Planner I; Bill Fritz, Development Process Manager; Francis McCall, Deputy Zoning Administrator; Frank Pohl, County Engineer; and Carolyn Shaffer, Clerk to the Planning Commission.

## Call to Order and Establish Quorum

## Public Hearing

### SP202300023 Buck Island Solar

Bill Fritz, Development Process Manager, said that as he reviewed this request for SP202300023 Buck Island Solar, he would outline the two key aspects that needed to be addressed by the Planning Commission. He said that since this was a solar facility, it must be reviewed for compliance with the comprehensive plan and the special use permit review criteria. He said that the Buck Island Solar project involved approximately 11 acres of solar panels, with about 30 acres of disturbed land, generating approximately 3 megawatts of power.

Mr. Fritz said that to begin, he wanted to address the broader question of the appropriateness of solar facilities in rural areas of the County. He said that according to Section §15.2.22.32 of the state code, the Planning Commission must review the project for consistency with the comprehensive plan. He said that this project was located in a rural area of the County, as indicated on the provided map. He said that there were two other approved solar projects in this map area, Woodridge Solar and Rivanna Solar, both located near the proposed Buck Island Solar facility.

Mr. Fritz said that the comprehensive plan did not directly address solar facilities. He said that during the review of the special use permit, staff had found that the facility would promote conservation and efficient use of energy resources, and demonstrate leadership in energy and carbon reductions at the local level, concepts included in the plan. He said that the approval of other solar facilities in rural areas indicated that these types of facilities were generally appropriate in these areas.

Mr. Fritz said that after reviewing the property, staff had found no resources or features that would indicate this use was inconsistent with the comprehensive plan. He said that staff was recommending that the Commission find this project substantially in accord with the adopted

comprehensive plan. He said that the map provided more detail on the character of the area and the location of the proposed Buck Island solar facility, as well as the approximate panel area of the Rivanna solar project. He said that to provide a clearer view, he had attempted to go around the areas that were actually in the panel. He said that this allowed the viewer to see the scale. He said that for the purpose of this discussion, he had used a circle as an approximate representation.

Mr. Fritz said that this plan showed the design of the solar facility. He said that the panel area was approximately 11 acres. He said that access was to Campbell Farm Lane, a public road. He said that the limits of disturbance were shown, along with the buffer to adjacent properties. He said that the panel area was well removed from any stream buffer area and no disturbance occurs within a stream buffer. He said that no critical slopes were impacted, and staff opinion was that the design of this facility substantially minimized visibility from adjoining properties and public streets.

Mr. Fritz said that the project had been reviewed for compliance with the criteria for a special use permit, and staff was able to recommend approval of this application. He said that there had been some changes in some of the conditions. He said that he had made a mistake on Condition 1 when he was writing it. He said that they generally stated general accord with the comprehensive plan. He said that he had mistakenly continued to reference the entire narrative, which was attached to the application plan. He said that however, it should only be the concept plan.

Mr. Fritz said that regarding Condition 14, over the years they had refined their conditions to make them better, and one of them was to prohibit above-ground wires except when necessary to avoid stream buffers or wetlands. He said that he had copied an old condition, so they would like to replace it with this. He said that this would allow them to be avoided if any were identified. He said that staff recommending approval, recommending that the Planning Commission find this substantially in accord with the adopted comprehensive plan, and recommending approval of the special use permit with the changes to Conditions 1 and 14 as recommended by staff.

Mr. Clayborne said that as they were looking to the future, he was wondering what percentage of their energy they aimed to generate from solar power. He said that he was referring to their climate action plans and other relevant documents, but he could not find that information readily available.

Mr. Fritz said that he was unsure if there was a specific number mentioned in the climate action plan. He said that the comprehensive plan did not contain this information, and it was not part of their review. He said that therefore, he was unable to provide an answer to the question. He said that he would have to research whether it was contained in the climate action plan.

Mr. Clayborne said that he could not find the information, but it was something that they all needed to be aware of as more of these applications came forward and as they began to cast their future plans.

Ms. Firehock asked, when staff reviewed these applications, if the scale of the project influenced their evaluation. She said that for example, the solar project they had shown them as a reference point nearby was utility-scale, whereas this project was not. She asked if they treated them differently. She said that she believed that utility-scale solar projects, like the one they had shown for reference, generated significantly more power. She said that in contrast, this project, although it did generate power, was smaller and less impactful.

Mr. Fritz said that staff had considered several factors for this particular project, including the 11

acres currently under panel and the 30 acres being disturbed, which were located in rural areas. He said that the minimum lot size in these areas was 21 acres. He said that as a result, it was possible to divide the land, build a house, and remove it from agricultural production, which would be permissible by right. He said that this was comparable to the scale of potential removal of agricultural production that could be done by right.

Ms. Firehock said that it appeared there was not much difference in this case.

Mr. Murray said that he was aware that in the past, they had discussed guidelines related to vegetation, particularly those put forth by the Natural Heritage Committee, which emphasized the importance of encouraging planting for pollinators and native species. He said that he was curious to know what guidelines the staff had discussed regarding the encouragement of planting for these sites.

Mr. Fritz said that there were two parts of the answer to that question. He said that through their experience with past solar projects and working with the proposed solar ordinance, they had gained valuable knowledge about what was available and best practices in other parts of the Commonwealth. He said that one of the conditions recommended by the state was that this project be certified as a pollinator-smart project.

Mr. Fritz said that this certification involved not only promoting pollinator species but also addressing soil regeneration, stormwater retention, and wildlife habitat for animals other than pollinators. He said that they had also included a condition that recommended fence heights, as specified by the state, which excluded deer passage, or allowing easy access to deer as well as smaller animals. He said that the fence must either be short enough for the deer to get over, or tall enough that they cannot get over, with a 4-inch gap at the bottom for small animals to get through. He said that this recommended fencing standard originated from the state.

Mr. Carrazana said that this project required 10 acres per megawatt, which seemed high compared to other facilities. He asked if there was a reason why.

Mr. Fritz said that he was unsure about the acreage of land disturbance per megawatt in past projects, so he could not compare this proposal to those projects in that way.

Mr. Carrazana said that he was reviewing a few examples across the state and the nation. He said that it appeared that 10 acres was a significant number compared to the average, but perhaps the applicant could discuss this further.

Mr. Carrazana opened the public hearing. He asked if the applicant had a presentation.

Laurie Schweller said that she was an attorney with Williams Mullen, representing Buck Island Solar LLC, the applicant. She said that she was joined by Eric Alves de Sa, who would present the request for a special use permit in substantial accord with the comprehensive plan on behalf of Nexamp. She said that Buck Island Solar LLC, which is wholly owned by Nexamp Solar, was also represented by Ryan Yauger from Bohler Engineering, the civil engineering firm for the project.

Ms. Schweller said that this project was located in the southeast part of the County, and the proposed solar facility would be situated in the northeast corner of the subject property, which spanned approximately 105 acres. She said that the site had been carefully sited to minimize

impacts on neighboring residences. She said that although the project was located off Buck Island Road, it was abutted by Campbell Farm Lane, and therefore, there were residential properties along the eastern side of the project. She said that Mr. Alves de Sa had worked closely with the neighbors to ensure sufficient buffering. She said that the site entrance was located on Campbell Farm Lane, and the project was accessible through this entrance, which was behind the trees.

Ms. Schweller said that she would like to take a few minutes to discuss community engagement. She said that the SUP application had been submitted last December, and they had promptly reached out to Monticello to obtain the necessary evaluation. She said that the facility was approximately five miles away, and they had not anticipated any negative impact. She said that Mr. Alves de Sa had immediately begun reaching out to the neighbors, and they had held a community meeting in February. She said that since then, they had been discussing with several neighbors, including those marked with blue dots on the screen, concerns such as buffering, access easements, and tree removal.

Ms. Schweller said that these concerns were largely a result of the Rivanna solar development, and therefore, neighbors were concerned about insufficient screening and stormwater runoff. She said that Mr. Alves de Sa had worked diligently with the neighbors to address these concerns, and their application concept plan had been modified to increase buffers.

Ms. Schweller said that they were currently working with Rob Nicholson, who owned Rooks Ford Farm, to address these issues. She said that the 3,500-acre farm was located north and west of the project, and they were currently working with him on buffer zones. She said that additionally, the property was held in a conservation easement by the County. She said that she would like to turn the discussion over to Mr. Alves de Sa, who could provide more information about the project.

Eric Alves de Sa said that he is the development manager for Nexamp, based out of their Washington, D.C. office. He said that their company adhered to a high standard when it came to site selection, site design, and community engagement. He said that each project was unique, and he hoped that by the end of this presentation, the Commission would largely agree that this was a well-designed community-scale solar project. He said that he would click back and pause on the view from Buck Island Road.

Mr. Alves de Sa said that if they looked down Campbell Farm Lane and followed the yellow arrow on the slide, they would see a wall of trees that appeared dark. He said that 150 feet of trees would be preserved and remain standing throughout the project. He said that this had been a topic of many conversations with the Fewell family, whose home they saw on the slide, and the Bazzarre family, who was to the right and north of this photo. He said that they had expressed a desire for at least 150 feet of forested buffer to remain, and they had a tree preservation easement with their landowner to ensure this was protected not only in the special use permit but also via easement.

Mr. Alves de Sa said that the only break in this 150-foot buffer would be for the site entrance, which would continue forward into the project area behind the cleared site. He said that in their current design, there was a slight S-shaped bend in the access road as it cleared through the 150 feet, and they intended to make this bend even more pronounced before presenting to the Board of Supervisors. He said that this would ensure that, from Buck Island Road or the Fewell family's driveway, there would be no direct line of sight to the site without passing through trees.

Mr. Alves de Sa said that he would like to discuss some of their site selection criteria. He said that

this site was fully screened. He said that the property had flat topography throughout, providing ample space for them to avoid any wetland features. He said that they were utilizing Campbell Farm Lane, as he had previously shown, to minimize the creation of new impervious surface area. He said that although approximately 30 acres of trees must be cleared for this 3-megawatt project, these were the same 30 acres that would be timbered regardless.

Mr. Alves de Sa said that this property had a history of timbering, with the last timbering occurring about 10 years ago. He said that the tree clearing areas were part of their regular periodic tree clearing. He said that the clean power generated by this project displaced fossil fuels, and the avoided greenhouse gas emissions would require 2,200 acres of U.S. forest to sequester.

Ms. Alves de Sa said that although 30 acres was a considerable portion, in answer to the question of why there were more limits of disturbance on this project for a smaller megawatt system size capacity, it was due to the tree clearing. He said that looking at the panels per acreage of megawatts, this was on par with other typical systems. He said that looking at the areas of disturbance, due to the need to clear trees so there were no shadows cast on the panels, it swayed the metric to a certain degree.

Mr. Alves de Sa said that when comparing their project to the nearby Rivanna Solar, their project was farther from the road and smaller in size. He said that they were also out of public view, whereas the Rivanna Solar project would be visible from the road at some point in the future. He said that in addition to the project benefits, solar energy provided a quiet neighbor with no traffic, noise, or burden to public services. He said that while this project generated revenue for the City through real estate tax increases, machinery and tools taxes, and potential rollback taxes, it also aligned with the state's clean energy goals, climate action plans, and concepts outlined in the County's comprehensive plan.

Mr. Alves de Sa said that he wanted to take a moment to discuss Nexamp, the company behind this project. He said that as an industry leader and veteran of the solar space, Nexamp had been a driving force in community solar for over 15 years. He said that they had developed end-to-end expertise at every step of the process, from development to construction, ownership, and maintenance. He said that as the developer, Nexamp oversaw the construction, was the long-term owner and operator, and handled energy sales with Dominion and customer subscriptions.

Ms. Alves de Sa said that in fact, for the past couple of years, Nexamp had been the top community solar provider in the country. He said that this partnership would provide the County with a long-term collaborator and single point of contact. He said that to summarize, the project's construction duration was approximately 12 months, with an operating term of at least 25 years, but potentially up to 40 years, followed by a six-month decommissioning period. He said that there were no plans for future expansion or energy storage.

Mr. Alves de Sa said that he would like to note the landscaping plan, particularly the 150 feet of tree preservation on the east side and the 75 feet of existing trees on the north side. He said that as they awaited feedback from the US Army Corps on their wetland delineation, they would explore opportunities to expand these preservation areas. He said that the west and south sides of the site also featured ample vegetation.

Ms. Alves de Sa said that he would like to provide a more detailed walkthrough of the site. He said that the red border indicated the special use permit area. He said that to the west, one would see floodplains, creek delineation, and the WPO buffer. He said that they were taking steps to

avoid those buffers and stay beyond the setbacks. He said that currently, their limits of disturbance were essentially the worst-case scenario for the extent of tree clearing. He said that they had received good early indications from the Army Corps on their wetland delineation, which should allow them to make the site more compact and potentially reduce the limits of disturbance as they moved through the site design phase.

Mr. Alves de Sa said that the access road in brown, which came in from Buck Island Road, had a curve to it. He said that they planned to make this curve more pronounced. He said that the access road as it entered the site and went south would be where their Nexamp and Dominion utility poles would be located. He said that they intended to place these poles behind the 150-foot buffer, with the last overhead wire coming in here and then crossing. He said that a neighbor's parcel already had an existing pole and wire, and they would need to upgrade to bigger poles and wires due to the amount of electricity coming through the project. He said that the final slide was an aerial image without true color, providing a visual representation of the site.

Mr. Murray said that they had included stormwater facilities in his plan. He asked if they could elaborate on his approach to implementing these facilities. He asked if they would primarily consist of retention basins, or biofilters would also be used. He asked if they had a clear plan in place for how these facilities would be designed and implemented at this point.

Ryan Yauger, Principal Engineer with Bohler Engineering, said that they intended to be retention basins. He said that he would meet both the state and County codes, as well as the WPO and Virginia Stormwater Management Program (VSMP) plans, when they reached the site plan stage.

Mr. Murray said that they often suggested, but did not require, that it was a good idea to incorporate biofilters into these systems. He said that this approach provided not only quality treatment, but also the opportunity to create a wildlife habitat, which retention basins alone could not offer.

Mr. Yauger said that he understood. He said that there were varying levels of retention basins between level one and level two, and these could be further explored in addition to other measures, as he had mentioned.

Mr. Alves de Sa said that this stage, this was their conceptual site plan, and what they had currently included was the conceptual stormwater management facilities. He said that it was still a preliminary concept, but he appreciated the feedback and would take note of it.

Ms. Firehock said that in the application, they had mentioned setbacks and stepbacks from the road and screening for the neighbors. She said that she would like to know more about the northern part of the site. She said that specifically, she noticed that it was only 25 feet from the property boundary. She asked if that was that measurement from the actual boundary of the property. She said that given that, it appeared to be a slightly narrower area.

Mr. Alves de Sa said that the existing green space should be preserved, as the site currently featured a mature loblolly pine that had been growing for over 10 years. He said that the adjacent parcel to the north was also expected to remain under conservation easement. He said that the setback in question was approximately 75 feet. He said that they would like to improve that to at least 100 feet.

Mr. Carrazana asked if the 75 feet was from the fence line or to the edge of the buffer.

Ms. Firehock said that it was difficult to read.

Ms. Schweller said that it was 75 feet of trees, but the distance from the boundary line to the fence was approximately 130 feet. She said that there was a 20-foot demarcation for landscaping.

Mr. Carrazana said that the 10 acres per megawatt was what initially caught his attention. He said that the reason for this was primarily due to the number of trees that needed to be cleared to provide adequate exposure. He asked if topography was also a factor in this calculation, and if there was a stream or other water feature that ran through the site.

Mr. Alves de Sa said that there was a stream that ran nearby, and he could see the hatching. He said that there was a branch that came this way. He said that the main creek follows the west boundary. He said that it terminated here as well. He said that their first preliminary wetland assessment from last year indicated that the wetland terminated there. He said that they had previously believed it extended further, which is why their current site layout was positioned slightly north of where it originally was.

Mr. Alves de Sa said that their most recent delineation with the Army Corps for approval had significantly reduced the extent of the wetland. He said that as a result, they believed there would be an opportunity to shift the entire array south, extending the wetland approximately 75 feet at the top and potentially up to 100 feet, thereby addressing the needs of their neighbors to the north and west.

Mr. Murray said that one issue they recently encountered was that many places were assessed for stream locations, but they experienced an extended drought over the past year or more. He said that as a result, many intermittent streams that would normally be apparent were no longer visible. He said that he hoped that this was taken into account when conducting the assessment. He said that specifically, he hoped that the drought that occurred over the past year was considered when evaluating the streams, as many places where streams were previously evident were now dry due to the drought.

Mr. Alves de Sa said that the assessment was completed in the springtime.

Ms. Firehock asked if the site required extensive grading to get these panels on the site.

Mr. Alves de Sa said that the dark gray areas on the map were critical slopes. He said that based on the visible areas, it was clear that the vast majority of their site was free of critical slopes, and they did not anticipate extensive grading or removal of topsoil in these areas.

Ms. Firehock said that this was in order to work with the current slopes and construction of the panels.

Mr. Alves de Sa said that yes, their racking providers and the racking systems they used to support the panels could accommodate tolerances of up to 20% grades.

Mr. Clayborne said that his earlier question was focused on the County's goals regarding their ability to claim a certain amount of energy from renewable sources, such as solar power. He said that he was seeking some guidance as they planned for the future.

Ms. Schweller said that based on her reading of the County's policy, it was intended to support the Virginia Clean Economy Act. She said that the goals of the act included achieving 73% of the Commonwealth's energy from renewable sources by 2035 and 100% by 2050. She said that in Dominion's territory, where they were located, this was a Dominion shared solar project. She said that as part of the shared solar program, they were required to provide 100% of their electricity from renewable energy sources by 2045. She said that this project would contribute to that goal.

Mr. Carrazana asked if any members of the public wished to speak on this item.

Ms. Shaffer said that there were no speakers signed up online or in person.

Mr. Carrazana asked if the applicant had any closing remarks.

Ms. Schweller said that she would like to touch on a couple more conditions. She said that Mr. Fritz had discussed some of the special use permit conditions, and she would like to discuss two additional conditions recommended in the staff report. She said that one was regarding the validity period, meaning how long the special use permit would be valid if approved by the County. She said that usually, this referred to when they would begin construction. She said that currently, the condition was written to commence three years after approval.

Ms. Schweller said that Nexamp would fully comply with that, but they would like to have it to be more in line with the recent Woodridge approval, which would be a five-year period. She said that they noted that Rivanna had a two-year period in the 2018 approval, which was later extended to five years. She said that they recognized that there were multiple state approvals, including site plans, local water protection ordinances, and others. She said that they believed that having a longer period for the special use permit would be more efficient. She said that they would like to request a five-year period, rather than the current two-year period, to allow for more time to complete the necessary approvals.

Ms. Schweller said that additionally, they would like to request that the Zoning Administrator consider the Pollinator Smart certification. She said that while the applicant would make every effort to obtain the certification, it was not guaranteed. She said that the applicant proposed language that was identical to the language used in the Woodridge solar project, which would allow the Zoning Administrator to approve a project that was consistent with the vegetation plan provided by Buck Island Solar, even if the Pollinator Smart certification was not obtained within the specified period.

Mr. Carrazana closed the public hearing and the matter rested with the Commission.

Mr. Fritz said that regarding the request for a five-year special use permit, he would discuss the history of the referenced solar projects. He said that Rivanna Solar was initially approved for a two-year period, but the applicant later amended their special use permit to extend it by three more years, resulting in a total of two separate approvals. He said that Ivy Solar was approved for a three-year term. He said that there is also the Midway Solar Project, which was approved for a three-year period. He said that Woodridge Solar was initially intended for a three-year duration, but due to the project's scale and size, it was ultimately approved for a five-year term.

Mr. Fritz said that they are recommending a three-year approval period for this project. He said that as their comprehensive plan is currently under review, they do not know what its final recommendations will be. He said that staff did plan to introduce a proposed ordinance for solar

energy systems in January, which will also be subject to change. He said that given this uncertainty, they recommend that permits expire after three years, allowing for flexibility in case the plan or regulations change. He said that the applicant will always have the opportunity to request an extension if needed.

Mr. Carrazana asked if Mr. Fritz could address the request regarding the Pollinator Smart certification.

Mr. Fritz said that they preferred to avoid conditions that implied diligence, as it could lead to differing interpretations of what constituted diligent effort. He said that he understood the applicant's concerns. He said that they had spoken with the individuals at the Virginia Pollinator Smart Program, which they believed would continue to exist and could be achieved. He said that as a result, they had written the condition in a way that reflected this.

Mr. Fritz said that if the applicant was unable to meet the condition for any reason, they could apply for an amendment to the special use permit and demonstrate their efforts to the Board of Supervisors, who could ultimately determine whether the actions had been diligent. He said that therefore, staff were not recommending a change to that condition.

Mr. Carrazana asked if the Commission had any further discussion regarding this application.

Ms. Firehock said that she believed the application was well-prepared and fell within a reasonable size scale. She said that she remained perplexed by the fact that their County did not currently have a solar policy in place. She said that although they did have the climate action plan, which discussed reusing rooftops, brown field sites, and already developed sites, it did not address solar farms in rural areas. She said that instead, it emphasized utilizing disturbed land first.

Ms. Firehock said that she thought that when the County updated its solar policy, it would address this omission. She said that in light of this, she did not feel that the comprehensive plan provided sufficient guidance, except for their goals for sustainable energy and climate. She said that despite this, she was inclined to support the application. She said that at the scale of this project and considering the extra effort put into stepping back from the borders and working with the neighbors, it did not appear to be a glaring issue that would cause a nuisance to the neighbors. She said that at this point, she was supportive of the application.

Mr. Clayborne said that he was happy to share his thoughts on the project and he appreciated the applicants' response to his question. He said that he felt strongly that the County should establish its own goals for mitigating greenhouse gas emissions, whether through solar or other renewable energy sources. He said that it was possible that a large number of these proposals could be submitted.

Mr. Clayborne said that just because a proposal was feasible and beneficial did not mean it should be widespread throughout the County. He said that having a clear roadmap or goals for reducing emissions would be helpful in answering the question of how this project contributed to the County's overall goals. He said that, in other respects, he was in favor of the proposal and viewed it as a positive project.

Mr. Murray said that he agreed with everything that had been said. He said that one of the key factors here was that the land had previously been a timber farm. He said that for those unfamiliar, loblolly pine was not a native tree species in most of Albemarle County. He said that therefore,

removing this non-native tree did not even constitute removal of a native tree planting.

Mr. Murray said that if they could replace some of the cover with native plants through the Pollinator Smart Program, they may actually be improving habitat for this area over the long term. He said that he was in support of the project. He said that he also appreciated staff's comments regarding the conditions. He said that often, these projects were resold to other parties, and having firmer commitments rather than looser ones was likely a good thing, particularly if the project did get resold.

Mr. Carrazana said that he would like to offer a few comments to provide more context to this discussion. He said that his comments were centered around the fact that they currently lacked a policy that took into account many factors. He said that to better understand this, he would like to share some information. He said that there was a tool called iTree, developed by the US Department of Agriculture, which measured the value of forests, including their intrinsic values such as mitigating flooding, moderating temperatures, and sequestering carbon. He said that it was an emerging science that put an actual value to the numerous benefits of forests.

Mr. Carrazana said that Virginia's forests were among the top performers in the country, ranking third in carbon uptake and 24th in total forest acres. He said that this meant that their forests were playing a significant role in mitigating climate change. He said that according to iTree, Virginia's forests stored 550 million tons of carbon, equivalent to $94 billion in avoided climate change costs. He said that this highlighted the importance of understanding the value of their forests, which extended beyond just trees to include soil and other ecosystem components that were part of agricultural lands as well.

Mr. Carrazana said that he was not taking a stance on this particular project, but rather aiming to provide context and emphasize the significance of this issue. He said that specifically, he would like to note that the carbon uptake represented 40% of Virginia's total carbon emissions, which was a substantial portion nationwide, accounting for 60% of the state's total carbon uptake. He said that he believed these points were crucial, and that they could all become more familiar with this information to better understand its implications.

Mr. Carrazana said that staff, the Planning Commission, and the community should be aware of this. He said that he would like to share a couple of additional pieces of information he had gathered. He said that they were all familiar with the trend of data centers in Virginia, but he was surprised to learn that Virginia now had the largest concentration of data centers in the world. He said that Singapore was second. He said that this subject facility was a 3-megawatt site, spanning 30 acres. He said that they had discussed why this was.

Mr. Carrazana said that to put this into context, in 2023 numbers, there were 1,900 megawatts, or 1.9 gigawatts, of multi-tenant data centers and 2,100 megawatts of single-tenant data centers, with 1,300 megawatts currently under construction. He said that some of these may have been completed by now. He said that the total capacity was over 5 gigawatts, with projections indicating it would double to 10 gigawatts by 2028 and reach 5 times that amount by 2030. He said that this did not account for the potential impact of AI.

Mr. Carrazana said that to better understand the scope of this, they should consider the implications of using solar energy to meet these needs. He said that he thought it was essential that they become aware of these factors and incorporate them into their policy development. He said that as with any energy source, there were pros and cons to solar energy. He said that they

had a lot of vilification of certain energy sources, such as gas, petroleum products, coal, and natural gas, but each had its pros and cons.

Mr. Carrazana said that he was thinking about the various ways they could obtain energy, and he estimated around 10-12 different methods. He said that solar energy, for instance, had its advantages, but it also emitted other greenhouse gases, including carbon dioxide, nitrogen trifluoride, sulfur hexafluoride, and hexafluoride. He said that the latter two had a significantly higher impact on greenhouse gases, ranging from 12,200 to 22,800 times worse than carbon.

Mr. Carrazana said that these gases were emitted during the manufacturing process of solar panels. He said that notably, 78% of solar panels were produced in China, and it was likely that many of these panels would be either made entirely in China or contained components sourced from China. He said that there were concerns about the manufacturing process, labor practices, and greenhouse gas emissions associated with these panels. He said that additionally, the transportation of these panels from China to their location contributed to further emissions.

Ms. Firehock said that they would eventually be decommissioned as well.

Mr. Carrazana said that the use of caustic chemicals such as sodium hydroxide, water, and electricity during production, as well as emissions of greenhouse gases, toxic waste, unsustainable mining practices, and habitat loss, were significant concerns. He said that the production process involved high energy input, soil degradation, water pollution from silicon mining, and challenges with recycling and shelf life. He said that it was unclear what would happen once the facility was decommissioned.

Mr. Carrazana said that he was not speaking specifically about this particular project, but rather to provide context for the County's benefit. He said that this was not a simple solution, and they needed to think critically and comprehensively about the issue. He said that rather than focusing on individual projects or facilities, they should consider the broader implications and take a holistic approach. He said that this information was readily available online, including from government sources such as Jones Lang LaSalle.

Mr. Carrazana said that there was ongoing debate about using farmland, agricultural land, and forest for solar and wind energy, and both sides of the argument had been extensively discussed. He said that in Virginia, they were likely to be at the forefront of this issue due to their projected energy demands, which were expected to double in the next 15 years. He said that nationally, solar energy accounted for only 8% of the energy mix, providing context for their efforts.

Mr. Clayborne said that he appreciated the context that had been provided, and he had just been reading an article in Virginia Business the other day. He said that Dominion had set clear climate action goals to fully electrify by a certain date, but there were concerns about the demand for data centers and their impact. He said that they had signed a memorandum of understanding with Amazon to explore nuclear energy options.

Mr. Clayborne said that he believed the pace was not sustainable in the current manner. He said that this was why he had asked a question about the County’s own goals, as he thought they could face a significant number of applications with no clear guidelines to determine how to proceed and make informed decisions. He said that he very much appreciated the context because it was real and unsustainable. He said that therefore, they must be more diligent and intentional in how they moved forward.

Mr. Murray said that he thought that some of the points made were relevant, particularly when they discussed the lack of a rural area plan. He said that the removal of land from commercial forestry as part of this process raised questions about their desired level of commercial forestry in Albemarle County. He said that if they had not established an optimal mix of land uses for the rural area, then any changes they made were altering the existing mix.

Ms. Firehock said that some localities had adopted a percentage of land they were willing to dedicate to solar energy, ensuring a balance between different land uses such as agriculture, forestry, and wildlife habitats. She said that this approach allowed for a more comprehensive evaluation of the site's potential. She said that she was concerned that Albemarle County was taking a long time to develop its solar policy, despite the fact that they were conducting a zoning review and comprehensive plan.

Ms. Firehock said that she was frustrated because she had recommended her consultants to James City County, and they had successfully developed a policy with their recommendations and adopted it last fall. She said that in contrast, they were still struggling to create a policy. She had said in the past that she heavily considered the current land use when making decisions on a potential change in use. She said that if this site were a mature hardwood forest, which would sequester more carbon than a forestry site, she would view it differently. She said that she would likely vote against disturbing a mature hardwood forest.

Ms. Firehock said that additionally, she wanted to note that the carbon sequestered in the forest was primarily stored in the soils, more so than the trees. She said that given that this site had been repeatedly timbered, she was concerned about the lack of a thick duff layer and the potential for thin topsoil. She said that she would like to see more information on the grading requirements for this site, as the staff reports suggested that it could be returned to farmland in the future. She said that when the top foot or more of topsoil was scraped off in other projects, the soil was often gone.

Ms. Firehock said that those agricultural soils were irreparably damaged and would take 50 to 100 years to return to active, productive farmland. She said that simply removing the panels would not restore the land to its former use. She said that instead, they were permanently damaging the soils through the scraping process. She said that she was glad to hear that the applicant’s site had minimal grading, as this would likely result in a lighter footprint on the land.

Mr. Murray said that, while it was preferable that this land be pine plantation rather than an oak forest, for example, which would sequester more carbon, it would have been even better if this land were a low-quality hayfield. He said that it appeared that they had secured several solar projects on pine plantation lands.

Ms. Firehock said that it was likely a market consideration. She said that perhaps someone would make more money from a solar field than the pine trees. She said that that was likely the driving factor.

Mr. Murray said that, in terms of prioritizing solar versus this option, they should focus on sites that were already cleared for development.

Ms. Firehock said that they could establish a solar overlay zone in the desired location. She said that there was already a map available. She said that she believed that they should give their

applicant a break and proceed to the vote, but she wanted to highlight the Department of Energy's existing map, which identified prime locations for solar installations. She said that this data was readily available, as it showed where solar panels could be connected to the grid.

Ms. Firehock said that in her work in forest conservation, she utilized these maps to track the threat of mature forests. She said that Albemarle County could access this information to determine the prime spots for solar in their area. She said that by combining this data with their existing habitat cores map and other relevant information, they could create a map that outlined their preferred locations for solar installations and areas where they would like to discourage them. She said that they already possessed the necessary data to move forward.

Ms. Firehock said that however, she did not agree that their current comprehensive plan provided clear guidance on this issue. She said that nevertheless, she was not willing to hold up this project due to this lack of clarity. She said that she was confident that the new comprehensive plan would address this matter, and their policy would eventually provide the necessary guidance. She said that she did not want to delay this business person's project, which was taking far too long in her opinion. She said that she believed they should vote on this matter.

Mr. Herrick said that there would be two separate votes. He said that the first would be on compliance with the comprehensive plan, and the second would be on the special use permit.

Mr. Clayborne motioned to recommend approval of SP202300023 Buck Island Solar is substantially in accord with the adopted comprehensive plan. Ms. Firehock seconded the motion, which passed unanimously (4-0). (Mr. Bivins, Mr. Moore, and Mr. Missel were absent.)

Mr. Clayborne motioned to recommend approval of SP202300023 Buck Island Solar, with the conditions outlined in the staff report, with changes to conditions 1 and 14 recommended by staff. Ms. Firehock seconded the motion, which passed unanimously (4-0). (Mr. Bivins, Mr. Moore, and Mr. Missel were absent.)

Ms. Firehock said that she would like to make one additional comment. She said that she wished the applicant luck with the Board of Supervisors. She said that she hoped the County would move with alacrity in developing their solar policy, in fairness to the business people who want to develop solar so they know what the County expects of them and what the comprehensive plan actually says about where solar facilities would be appropriate in the County.

Mr. Carrazana said that he hoped it would be a fully-informed policy.

## Adjournment

At 7:38 p.m., the Commission adjourned to December 10, 2024, Albemarle County Planning Commission meeting, 4:00 p.m.

Michael Barnes, Director of Planning

(Recorded by Carolyn S. Shaffer, Clerk to Planning Commission & Planning Boards; transcribed by Golden Transcription Services)

| Approved by Planning Commission |
| --- |
| Date: 12/10/2024 |
| Initials: CSS |