

**MEMORANDUM**

TO: Patrick White  
Alexandra Spaulding  
Spotsylvania County

FROM: Charlie Payne  
Vicki Joyner  
Hirschler Law

DATE: January 8, 2019

RE: SPower Solar Facility Special Use Permit (“SUP”) Analysis  
SUP Proposals SUP18-0001, -0002 & -0003  
Accordance with Comprehensive Plan  
Adequate Mitigation of Impacts

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**Introduction**

Sustainable Power Group (“sPower”), the leading independent producer of solar facilities, is the contract purchaser of multiple non-contiguous parcels<sup>1</sup> (the “Property”) located in Spotsylvania County, Virginia, (the “County”) on which it wishes to develop a 500 MW solar energy facility (“SEF”; the “Project”). The facility will generate electricity for sale to corporate clients, filling a growing need to supply energy to high-tech industries which are increasingly turning to renewable energy to meet their business needs.

sPower’s proposed project (1) conforms to the County’s specific zoning requirements; (2) significantly advances multiple goals of Spotsylvania County’s Comprehensive Plan (“Plan”), including its overarching development goal of promoting business and achieving increased commercial tax revenues; and (3) helps the Commonwealth achieve its goal of expanding solar energy. And it does so while minimizing any detrimental effects the Project may have on the surrounding neighbors and environment.

**1. The Project conforms to the County’s specific zoning requirements.**

sPower has under contract 6,350 acres of land located in western Spotsylvania County, approximately 650 feet south of the intersection of West Catharpin and Post Oak Road. The

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<sup>1</sup> The Tax Map Parcels comprise three Solar Centers as follows: (1) Solar Center A – Tax Map Parcels 28-A-71, 29-A-2A, 29-A-2, 28-A-77, 16-A-1, 29-A-24, 29-A-25, 29-A-26, 29-A-27, 17-A-47, 29-A-28, 29-A-22, 18-A-15, 18-A-20, 28-A-1, 28-A-78, 29-A-1, 28-A-79, 30-A-1, 18-A-16, 17-A-4, 17-A-3, 17-5-19, 17-A-3A, 17-A-48 & 17-A-7; (2) Solar Center B – Tax Map Parcel 28-A-58; and (3) Solar Center C – Tax Map Parcels 29-A-7 & 43-A-3.

Property is currently zoned for Agricultural 3 (“A-3”) use, which allows development of SEFs with a special use permit. The Property is located outside of the Primary Development Boundary and is identified for rural residential development on the Plan’s Future Land Use Map. The surrounding property is largely composed of rural and low-density residential uses. The Fawn Lake subdivision lies to the northeast of the proposed project.

Under the Spotsylvania County Code Zoning Ordinance (the “Code”), A-3 districts are intended to promote and protect large lot size parcels in order to maintain the county’s rural character and to protect, support, and enhance the county’s agricultural economy.<sup>2</sup>

Permitted uses in A-3 zones include agriculture, bed and breakfast facilities, single-family detached dwellings, community centers, game preserves, golf driving ranges, and public facilities.<sup>3</sup> The Code identifies specific standards for A-3 districts, including restrictions on floor area, proximity to numbered state roads, and restrictions on the use of outside storage of any vehicle, equipment or parts.<sup>4</sup> Solar energy facilities are permitted in A-3 districts, subject to approval by the County Board of Supervisors by issuance of a special use permit.<sup>5</sup> In 2017, the County added this special use when it amended County Code Chapter 23, permitting solar energy facilities by special use permit in the Agricultural 2, Agricultural 3 (A-3), and Rural zoning districts.<sup>6</sup> “Special uses” are generally considered compatible with other land uses permitted in a zoning district.<sup>7</sup> Along with the allowance of these facilities, the amendment set forth the criteria by which the County would approve special use permits for SEFs, as discussed in more detail below. Additional specific requirements for SEFs such as the use of biodegradable cleaning products and compliance with screening requirements are also set forth in the Code.<sup>8</sup>

In order to approve a special use permit for SEFs, certain criteria must be met, including the requirement that the use be in accord with the County’s Comprehensive Plan; that the proposed use will not adversely affect the health or safety of persons residing or working in the neighborhood of the proposed use; that the proposed use will not be detrimental to the public welfare or injurious to property or improvements within the neighborhood; that the proposed use is appropriately located near public facilities; and that the proposed use will not cause undue traffic congestion or create traffic hazards.

sPower has met these criteria and has implemented sufficient mitigating factors to offset any potential adverse effects potentially arising from the project.

***1.1. The Project significantly advances multiple goals of Spotsylvania County’s Comprehensive Plan (“Plan”).***

First, as further discussed in section 2, and as required by Code Chapter 23, the Project

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<sup>2</sup> Code § 23-6.4.1.

<sup>3</sup> *Id.* § 23-6.4.2.

<sup>4</sup> Code § 23-4.5.7(b).

<sup>5</sup> *Id.* § 23-6.4.3(45).

<sup>6</sup> Spotsylvania County, Virginia Board of Supervisors Meeting, Nov. 9, 2017 Minutes.

<sup>7</sup> Code § 23-4.5.1.

<sup>8</sup> Code § 23-4.5.7(d).

aligns with and promotes the Plan's goals.

**1.2. The Project does not adversely affect the health or safety of neighbors.**

The Project also meets the Code's requirement that it not adversely affect the health or safety of people living or working near the Project. Citizens and the County have cited several health and safety concerns potentially posed by the Project, including the risk of fire and the damaging effect of burning, concerns of metals leaking into the environment, general hazardous materials concerns, risk of electro-magnetic exposure, and risk of a heat island effect. As discussed below, those concerns have either been addressed by sPower or are largely unwarranted.

**1.2.1 The risk of fire at the Project site is very low.**

First, citizens argue that the Project creates a risk of fire. This concern is largely unfounded. During operation, the risk of fire at an SEF is very low. This is due to the fact that only a very small portion of the materials and panels used at an SEF are flammable, and the heat from a flame is typically inadequate to ignite a panel. Further, there are no fuels feeding the facility as the project is a renewable energy resource.

Not only are the panels unlikely to ignite, but the Project site will be largely free of combustible vegetation, with only a ground cover of maintained vegetation adjacent and beneath the solar tracker.<sup>9</sup> Further, the modified fuel areas and construction type and material are designed to resist ignition from ember showers.<sup>10</sup> In the unlikely case a fire should occur, the facility has electric disconnects that can immediately cut off energy production and de-energize the Project.<sup>11</sup> The Project is further monitored 24-7 with personnel on the ground and by remote surveillance.

Further, sPower has invested a significant amount of money in safety and mitigation design in the rare event a fire should occur.<sup>12</sup> And in conjunction with the county's fire department, it has developed a robust emergency response plan to respond to any fires that should occur onsite. Although citizens have argued that the site is located 7 miles away from the nearest fire station, the County has already noted that a fire station is needed in the site area regardless of whether the Project is approved or not.<sup>13</sup>

That fact, combined with the low risk of fire and the strong emergency response plan already in place should alleviate any concern of risk of fire due to the Project.

Citizens have also expressed opposition to any burning of woody debris on the site because this can cause a health and safety hazard. But sPower has committed to only burning in accordance with Federal, state, and county regulations and will conform with requirements and

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<sup>9</sup> sPower Emergency Response Plan at 8 (Nov. 27, 2018).

<sup>10</sup> *Id.*

<sup>11</sup> Emergency Response and Hazard Mitigation, sPower Response to Comments, Round 1 (June 11, 2018).

<sup>12</sup> Email from Ron Harris, REC, to Charlie Payne (Nov. 28, 2018).

<sup>13</sup> Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 14 (Dec. 12, 2018).

practices set forth in its emergency response plan.<sup>14</sup> Further, burning will be only one of three methods to remove woody debris from the site and occur only in deep trenches with air-burning equipment to eliminate smoke. Burning, under county ordinance, is prohibited during the months of May through September, and sPower has further proposed that all burning will occur at least 2000 feet from any residence, which meets the County's most restrictive standards. Thus, any burning will not pose a health hazard.

*1.2.2 The metal used in the solar panels is not harmful and leakage is highly unlikely.*

Second, citizens have argued that the levels of the metal, cadmium telluride ("CdTe") in the PV panels present too high a risk due to the potential leaching of the metal should the panels break and come into contact with the site's acidic soils and water.<sup>15</sup> These fears are unfounded for several reasons. First, cadmium naturally occurs in the environment without posing more risk than that found in solar panels.<sup>16</sup> And if handled properly, the panels will not emit any toxicity into the environment. Second, even if the panels did break and leach out, the concentration of cadmium in the soil, air, and groundwater would still be below conservative human health screening levels. Moreover, the CdTe found in PV panels is not the same as free cadmium, but is an extremely stable, nontoxic compound, as evidenced by the extensive research and evidence sPower has already provided to the County.

Further, studies by third parties have found little evidence suggesting that CdTe-based solar panels present risk to the public or the environment. For example, soil testing at a solar facility in California concluded that solar farm operations do not appear to have impacted soils with cadmium.<sup>17</sup> Although citizens have cited a sole study in support of their argument that the leakage of CdTe will cause a hazard, that study was based on simulated conditions and fails to mention results from the analysis were negligible.

Finally, sPower has established extensive protocol to monitor CdTe currently present at the site, including baseline soil testing, sample soil collections during the facility's operations phase, sample analyses for cadmium, reporting for each sample event, and remediation if cadmium levels are too high. And should remediation be necessary, sPower will undertake remediation in accordance with all applicable federal, state and local requirements.

*1.2.3. The Project does not generate hazardous materials that will pose a threat to the public.*

Given the simple construction and operation of SEFs, the Project does not present hazardous material threats to the public, despite citizen's general concerns that the Project will generate hazardous materials.

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<sup>14</sup> Fire, Rescue, and Emergency Management, sPower Response to Comments, Round 3 (Sept. 24, 2018).

<sup>15</sup> Analysis of sPower SUP's Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 7 (Nov. 7, 2018).

<sup>16</sup> Letter from Dewberry Engineers, Inc. to Wanda Parrish, County of Spotsylvania (Nov. 26, 2018) in Staff Report for SUP 18-0001, Planning Commission, County of Spotsylvania, at 58 (Nov. 29, 2018).

<sup>17</sup> Limited Soil Sampling Report of Sierra Solar Greenworks, Terracon at 1, 4 (June 15, 2018).

Although the Project itself will not generate hazardous materials during construction, the field equipment used during construction will contain various hazardous materials, such as hydraulic oil, diesel fuel, and other petroleum-based solvents. These materials, like any other construction site, will be properly managed and controlled. But the SEF itself is simple in construction and operation and does not present hazards to the community or public. Further, PV technologies and solar inverters are not known to pose any significant health dangers to those neighboring the plant.<sup>18</sup> Unlike other forms of energy, solar facilities do not require transfer of fuel to the project site, do not generate waste streams from use of fuel and do not exacerbate or create the potential for hazards such as flooding due to dam failure.<sup>19</sup> As documented in numerous academic and industry studies, there is no potential for release of hazardous materials from the solar panels in the event they become damaged. But should the solar panels break during operations, they will be safely moved and returned to the manufacturer for proper recycling and disposal in compliance with all regulations.<sup>20</sup>

Despite the minimal risk of hazardous materials, and although a disaster response plan is not warranted for the site, sPower has established standard health and safety plans for both the construction and operation of the facility. That plan includes collaboration between sPower and local emergency services to review potential natural disaster scenarios and the appropriate action that should be taken around an electrical facility during these conditions.<sup>21</sup> Additionally, sPower staff is accessible to County representatives and EMS 24 hours a day, 365 days a year should any emergency arise.

In sum, the durability of the SEF is extremely important to sPower and the project is designed to meet stringent building and structural codes. All of sPower's project sites use standardized methods to ensure structural integrity of the projects, which are rigorously inspected throughout the installation and commissioning phases of the projects.<sup>22</sup> As a result, the risk of hazardous materials impacting the public are minimal, if they exist at all.

#### *1.2.4. Electro-magnetic exposure from the Project is negligible.*

Citizens are also concerned that electro-magnetic radiation will potentially emanate from the site, causing adverse potential health effects. But this concern is unwarranted. Exposure to electric fields is negligible because the Project has relatively low voltage and amperage—even within the site, voltage and amperage is similar to that in other neighborhoods that contain low and medium voltage distribution lines.<sup>23</sup> Further, electromagnetic fields attenuate rapidly to background levels in less than 20–30 feet, or within the setback from the Project boundary. Thus, the public will not be adversely impacted by electromagnetic radiation emanating from the site.

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<sup>18</sup> Health and Safety Impacts of Solar Photovoltaics, NC State University at 1.

<sup>19</sup> Emergency Response and Hazard Mitigation, sPower Response to Comments, Round 1 (June 11, 2018).

<sup>20</sup> Spotsylvania Solar Energy Center FAQs.

<sup>21</sup> Emergency Response and Hazard Mitigation, sPower Response to Comments, Round 1 (June 11, 2018).

<sup>22</sup> *Id.*

<sup>23</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 4.12.

*1.2.5. Little evidence exists that the Project will cause a heat island effect*

Citizens have expressed concern also about the potential for a heat island effect resulting from the Project. “Heat island effect” is a term that refers to the increase in ambient temperature in both natural and urban environments due to land use changes. Citizens argue that the project will create a heat island effect through the removal of 5,000 acres of trees in order to build the SEF and the potential threats from the SEF to the nearby Po River watershed. They believe that if the trees are not replanted, there will be a huge, permanent loss in greenhouse absorption capacity and that the heat island could affect the numerous streams and wetlands surrounding the facility, while increasing water evaporation rates and reducing rainfall.<sup>24</sup> Further, citizens argue that sPower wrongly relies on a study of a much smaller SEF that concluded only a small heat island effect would occur, asserting that sPower has not provided any research on how this conclusion would scale up to its much larger facility.

However, the research has not indicated that the scale of a solar farm has an effect on the heat island effect findings as the solar facilities increase in size. In fact, the existing empirical data regarding the heat island effect resulting from the installations of SEFs is limited, thereby calling into question the citizens’ argument.

Although it is true that temperatures within solar fields may be a few degrees higher than surrounding areas, studies have found that the temperature dissipates quickly in just a few feet above and away from the solar site, especially with the presence of vegetation, trees, and berms. The data also indicates that the site cools completely at night, making a heat island very unlikely.<sup>25</sup>

Nevertheless, to address the concerns of citizens, sPower is designing the Project to allow for maximum setbacks (beyond 50 feet) from adjacent property owners, to include a minimum 100 –foot vegetation setback, including a minimum 250-foot setback from all of the properties in the Fawn Lake subdivision adjoining the project. sPower is also maintaining or installing berms and landscaping that would further reduce heat emanating from the PV solar arrays through absorption, thereby eliminating any heat island effect on neighboring properties.<sup>26</sup>

Finally, it should be noted that sPower operation and maintenance staff regularly work within operating solar arrays on existing solar energy facilities in desert regions and are never exposed to unsafe temperature levels.<sup>27</sup>

Given all of the aforesaid, citizens should not be concerned that the Project poses any heat island threat.

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<sup>24</sup> Analysis of sPower SUP’s Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 3 (Nov. 7, 2018).

<sup>25</sup> Heat Island Executive Summary Literature Review

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

**1.3 *The proposed use will not be detrimental to the public welfare or injurious to property or improvements within the neighborhood.***

Not only does the proposed Project not have an adverse effect on the health or safety of neighbors, but it is not otherwise detrimental to the public welfare, in accordance with the Code.

For example, the Project generates very little waste and over 90% of a the Project is recyclable. During construction, no export of materials is proposed; rather, grading and fill materials, as well as boulders and stones will be moved, if necessary, and remain onsite. Woody debris will be hauled away, mulched onsite and used for erosion control or burned. Construction waste will consist mostly of recyclable materials such as cardboard, steel, and electrical wiring and will be disposed of in accordance with county requirements. All panels that break during delivery or installation will be shipped back to the manufacturer for proper disposal.<sup>28</sup>

During the facility's operation, waste is not expected to be generated in significant quantity during operation of the Project.<sup>29</sup> If the SEF is damaged in any way, any resulting waste will be broken down and shipped back to the manufacturer for proper disposal.<sup>30</sup>

Therefore, waste is minimal and will not be detrimental or injurious to the neighboring properties.

Opposition forces have also stated that the proposed use will have an adverse impact on property values. This allegation is unfounded and without support. sPower recently retained the services of Chris Kaila, who is a certified Commonwealth of Virginia appraiser. He has been appraising and selling real estate in Spotsylvania County for over forty years. His report, dated December 28, 2018, concluded:

“There is no evidence that there is any negative impact on neighboring property values, despite unsupported claims to the contrary. The studies that have been done on this issue, that I find to be credible, also conclude and agree that there is no negative impact on property value resulting from proximity to solar farms.”<sup>31</sup>

**1.4 *The proposed use is appropriately located near public facilities.***

The Project is appropriately located near to a County water source, viz., the Fawn Lake subdivision water main. sPower would bear the cost of extending the water into the Project and half the cost of improving the line, which will mainly benefit the Fawn Lake community. The Project's water source is discussed further in section 2.2.4. Further, sPower has under contract approximately 60 + acres located within the Fawn Lake development for purposes of extending said public water line improvements and buffering the Project from the Fawn Lake neighborhood.

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<sup>28</sup> Construction and Decommissioning, sPower Response to Comments, Round 1 (June 11, 2018).

<sup>29</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 4.7.

<sup>30</sup> Heat Island Executive Summary Literature Review.

<sup>31</sup> Christopher Kaila, MAI, SRA Report, titled “Solar Farms Impact on Neighboring Properties, Research and Conclusions of Spotsylvania County, Virginia Project,”

**1.5 *The proposed use will not cause undue traffic congestion or create traffic hazards.***

One of the largest citizen concerns over the Project is the construction noise and traffic. Specifically, the Concerned Citizens of Spotsylvania (“CCSC”) have argued that sPower has not provided sufficient detail on sourcing their materials to determine whether its traffic mitigation measures are sufficient.<sup>32</sup>

But sPower’s mitigation measures, as described below, are more than sufficient to minimize construction noise and traffic, and the Project is in compliance with the County’s impact mitigation policy.<sup>33</sup>

First, citizens have argued that the noise and traffic resulting from construction of the project will be excessive, notwithstanding the County’s Noise Ordinance that expressly exempts noise from construction if the construction is performed during the day. Despite this exemption, sPower has drafted conditions to mitigate construction noise impacts on the neighbors.<sup>34</sup> Those conditions include:

- Placing all stationary equipment so that emitted noise is directed away from sensitive receptors;
- Locating pile drivers such that their rears face towards the noise sensitive receptors when the machine is being utilized;
- Locating equipment staging in areas that will create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all project construction;
- Ensuring proper maintenance and working order of equipment and vehicles, and that all construction equipment is equipped with mufflers and baffles.<sup>35</sup>

Further, the construction of the Project poses the only real source of noise, due to increased traffic and general construction activities at the site, which will last for approximately 18–24 months. But during that timeframe, construction noise will be at its peak for only four days, then will drop off dramatically.<sup>36</sup> Once the facility is operational, noise will be minimal.<sup>37</sup>

Not only has sPower taken great measures to reduce the noise resulting from the Project’s construction, but it has crafted long-term solutions for noise mitigation through vegetative

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<sup>32</sup> Analysis of sPower SUP’s Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 9 (Nov. 7, 2018).

<sup>33</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 31 (Dec. 12, 2018).

<sup>34</sup> Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 7 (Dec. 12, 2018).

<sup>35</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 3.11.

<sup>36</sup> Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 7 (Dec. 12, 2018).

<sup>37</sup> Spotsylvania Solar Energy Center FAQs.

screening and buffering.<sup>38</sup> In particular, to reduce potential noise to residents of the nearby Fawn Lake subdivision, sPower has proposed to erect an earth berm at the property boundary to reduce noise levels below the County ordinance's permissible level. The berms will be 6 to 8 feet tall and will have trees and shrubs planted in front or on it to make it more visually appealing.<sup>39</sup>

In addition to construction noise concerns, citizens are also worried about construction traffic. Through a traffic impact analysis performed, sPower has concluded that during construction, a maximum of 800 employee trips during peak construction will occur, with an average of 350 employee trips and an average of 70 trips per day for construction equipment and deliveries. On-site staging and parking areas will be provided for employees and construction vehicles.<sup>40</sup>

To offset the impact of the increased traffic, sPower has taken significant steps to address traffic concerns. For example, where sPower must use private access easements for ingress and egress, they will be treated with the utmost care: strict 15 mph speed limits will be enforced, and all appropriate flagging and signage will be in place to act as constant reminders. Additionally, health and safety inspections will regularly monitor and enforce site rules and speed limits throughout the project site and access easements. sPower will also notify all nearby neighbors of the construction activities and provide contact numbers for personnel, should any issues with traffic and construction activities arise.<sup>41</sup>

Citizens have expressed concern over the impact of this increased construction traffic on commuting activities and school buses. To address the issue, sPower has identified the peak traffic hours on school and workdays for West Catharpin and Post Oak Roads and has committed to having workers arrive and depart from the construction site before peak hours. Further, sPower will coordinate deliveries between 9 AM and 3 PM in order to further mitigate traffic impacts and avoid school bus activities. sPower is also requiring a carpool plan from the contractor to reduce traffic impacts in relation to the project.<sup>42</sup>

As described above, sPower has adequately addressed traffic concerns during construction. And it should be noted that once the Project is complete, traffic will be minimal, as its operations require little maintenance, generates little noise, requires few vehicle trips for employees or materials, and requires little use of public services. This is due largely to the fact that the facility will be operated remotely and any onsite maintenance that is required will be scheduled to avoid peak load periods; thus, the traffic to and from the site will be minimal.<sup>43</sup>

In sum, the Project has thoroughly anticipated and complied with the County's regulatory criteria for granting a SUP by addressing concerns related to the health and welfare of citizens

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<sup>38</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 38 (Dec. 12, 2018).

<sup>39</sup> Spotsylvania Solar Energy Center Project Noise Study Memorandum, Kimley Horn at 6, 14 (Sept. 20, 2018).

<sup>40</sup> Spotsylvania Solar Energy Center FAQs.

<sup>41</sup> Generalized Development Plan Narrative, sPower SUP for Center A, at 3.6.

<sup>42</sup> Access Management and Transportation, sPower Response to Comments, Round 3 (Sept. 24, 2018).

<sup>43</sup> Staff Report for SUP 18-0001, Planning Commission, County of Spotsylvania, at 5 (Nov. 29, 2018); Generalized Development Plan Narrative, sPower SUP for Center A, at 4.0.

and potential injurious effects on the surrounding properties. And not only has it achieved this technical compliance, it has also met the more precatory aspirations of the County's Comprehensive Plan, the guidelines of which are discussed next.

## **2. The Project significantly advances multiple goals of Spotsylvania County's Comprehensive plan.**

### ***2.1. The Project promotes the Plan's goals, although the Plan is not binding authority.***

Under Virginia law, every local government must adopt a comprehensive plan as a general guide to development.<sup>44</sup> The comprehensive plan must be made in order to guide and accomplish a “coordinated, adjusted, and harmonious development” of the territory which will best promote the health, safety, morals, order, convenience, prosperity, and general welfare of the inhabitants.<sup>45</sup> The comprehensive plan shall be general, rather than specific, in nature.<sup>46</sup> Further, the comprehensive plan is *not* a zoning ordinance, but only a comprehensive guideline for zoning ordinances.<sup>47</sup> Therefore, in making zoning determinations, the local governing body must consider not only the general guidelines set forth in the Comprehensive Plan, but other factors as well, such as the location of property lines, the physical characteristics of the land, and other factors affecting “optimum geographical alignment.”<sup>48</sup>

The fact that the Comprehensive Plan is merely a guide for development, rather than an instrument of land use control, allows the governing body to overrule an action by the planning commission regarding zoning decisions.<sup>49</sup> Thus, a board of supervisor's decision to override the planning commission's denial of a special exception permit allowing a golf course to be built on land zoned for agricultural use, was proper because the minimum standards of the Comprehensive Plan were only guidelines, not requirements to be applied inflexibly by the board.<sup>50</sup> It was within the board's discretion to decide whether or not to adhere to those standards or to follow some other reasonable approach in determining whether to grant or deny the rezoning application.<sup>51</sup> However, the caveat is that the board's approach must be *reasonable*. If its deviation from the comprehensive plan is arbitrary or capricious—such as randomly granting and denying rezoning applications for the same use in the same area, the governing body's decision is not justified.<sup>52</sup>

Applying that principle, a Virginia circuit court found a board of supervisor's denial of a rezoning application that would allow higher-density development on a property unreasonable, because the proposed use was commensurate with the uses of the surrounding properties.<sup>53</sup> The

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<sup>44</sup> Va. Code § 15.2-2223(A); *Kansas-Lincoln, L.C. v. Arlington Cty. Bd.*, 66 Va. Cir. 274, 283 (2004).

<sup>45</sup> Va. Code § 15.2-2223(A).

<sup>46</sup> *Id.*

<sup>47</sup> *Bd. of Supervisors v. Snell Constr. Corp.*, 214 Va. 655, 660 (1974).

<sup>48</sup> *Id.*

<sup>49</sup> *Guest v. King George Cty. Bd. of Supervisors*, 42 Va. Cir. 348, 352 (1997).

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* (quoting *Loudoun Cty. v. Lerner*, 221 Va. 30, 37 (1980)).

<sup>52</sup> *Bd. of Supervisors v. Williams*, 216 Va. 49, 61 (1975).

<sup>53</sup> *Id.* at 50–51.

board denied the request on grounds that the higher-density development of the area should not occur until public facilities were adequate.<sup>54</sup> But the court determined that the public facilities were or soon would be available to serve the land in question; therefore, the board's denial of the application was discriminatory.<sup>55</sup> Further, a court will give weight to the manner in which a governing body itself interprets its own comprehensive plan.<sup>56</sup> Therefore, the comprehensive plan is an advisory guide that does not bind the locality.<sup>57</sup>

With this analysis in mind, we now examine whether the proposed SEF does in fact align with the goals of the County's comprehensive plan.

## ***2.2. The Project meets several specific Plan goals.***

The County's Plan outlines its goals for future development and land use, which is designed as a guide to encourage the most appropriate use of land, water, and resources within the County consistent with citizens' interests. It sets forth the goals, objectives, policies, and implementation techniques that will guide development activity within the County while preserving and protecting the health, safety, and general welfare of its citizens.<sup>58</sup> As noted above, although instructive, the Plan is merely a guide—not law—and other rationales for zoning decisions may be used where necessary.

Most relevant to the instant Project is the Plan's overarching emphasis on promoting a business friendly community that prizes job creation, while aspiring to achieve annual growth of the industrial and commercial tax base at a rate greater than 2%. As part this emphasis, the Plan encourages innovative uses such as renewable energy generation in agricultural and rural areas, so long as they are designed to minimize detrimental impacts to neighboring properties, uses, and roadways.<sup>59</sup> The Plan also seeks to maximize the use of existing infrastructure and public facilities and encourages the most appropriate use of land, water, and resources while preserving historic and cultural resources and mitigating detrimental environmental impacts of development.<sup>60</sup> Each of these aspirations as relevant to the Project will be discussed in turn.

### ***2.2.1. The Project promotes the County's economic goals.***

The Plan supports development that promotes job creation. The County considers itself a business friendly community and appears to give preference to projects that promote job growth.<sup>61</sup> Further, in 2018, the Plan was amended to add provisions encouraging the development of renewable energy projects.<sup>62</sup> More importantly, the amended Plan expressly views renewable energy generation as a complementary land use in agricultural and rural areas.<sup>63</sup>

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<sup>54</sup> *Id.*

<sup>55</sup> *Id.* at 52.

<sup>56</sup> *Guest v. King George Cty. Bd. of Supervisors*, 42 Va. Cir. 348, 352 (1997).

<sup>57</sup> *Id.*

<sup>58</sup> Comp Plan, Introduction & Vision at 2.

<sup>59</sup> *Id.* at 4.

<sup>60</sup> *Id.* at 2.

<sup>61</sup> *Id.* at 4.

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* at 5.

Thus, not only are SEFs compatible with the Plan, but the County has even deemed them complementary to agricultural uses.

In addition to providing a complementary land use to the current agricultural use, the Project will likely generate tremendous direct and indirect economic benefits: The project is anticipated to create between 700 and 1000 new construction jobs and pump approximately \$54 million into the local and regional economy. Initially, 25–30 full-time operational jobs will result from the development, creating approximately \$2.5 million additional labor income. The total tax revenues will reach between \$9 and \$10 million, which is significantly higher than the current taxes generated, creating a 1300% increase in tax revenue. Further, the development will create up to \$25 million investment in the County, including parks, fire and rescue, roads, and schools over the life of the project.<sup>64</sup>

This positive economic benefit greatly outweighs the current benefits being generated by the site's agricultural use, which only yields 228 full-time equivalent jobs, \$1.2 million in associated labor income, and \$2.8 million in economic output.<sup>65</sup>

This data counters CCSC's argument that the loss of such a large rural tract close to the Wilderness and Spotsylvania Courthouse Battlefields, and the subsequent development of a SEF on those lands could have an adverse economic impact.<sup>66</sup> In truth, the research demonstrates that contrary to this argument, the Project will profoundly benefit the County's economy.

### *2.2.2. The Project promotes the County's fiscal goals.*

The proposed Project greatly aids the County's goal of aspiring to achieve annual growth of the industrial and commercial tax base at a rate greater than 2% by generating approximately \$8.4 million in net local tax revenue payments over the next 40 years.<sup>67</sup> This significant growth is directly due to the increased tax revenue to the County as the result of changing the use of the property from agricultural to industrial, which increases the assessed value of the property for purposes of real estate taxes. In such instances, the County requires the owner to pay "roll back taxes" or the difference in the current and previous real estate taxes on the property for the previous 5 years.<sup>68</sup> For this Project, the roll back taxes will total a \$87,000 one-time payment to the County.<sup>69</sup>

Further, the gross county revenue from the project is estimated at \$1.2 million for the first year of operation (exclusive of county fees for permitting), which will decline to \$79,436 in the

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<sup>64</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at i (May 2018); Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 13–14 (Dec. 12, 2018).

<sup>65</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at i (May 2018).

<sup>66</sup> Analysis of sPower SUP's Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 10 (Nov. 7, 2018).

<sup>67</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at 25 (May 2018).

<sup>68</sup> *Id.* at 17.

<sup>69</sup> Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 11 (Dec. 12, 2018).

40th year.<sup>70</sup> And the Project will generate \$3.5 million in state and local tax revenue from the one-time pulse of construction activity and \$936,152 in net county revenue in the first year of operation (which would gradually decline to \$48,461 in the 40th year of operation).<sup>71</sup>

Not only will the Project generate significant tax revenue for the County, but it will also increase required school funding by approximately \$278,773 in the first year of operation with that figure expected to gradually decline to approximately \$30,975 in the project's 40th year of operation.<sup>72</sup>

In contrast, if the project site was instead used for residential development, the estimated net fiscal impact would be approximately \$2,495 per year for a cumulative total of \$99,800 over 40 years. This is drastically lower than the approximately \$8.4 million in tax revenue resulting from the proposed Project.<sup>73</sup>

This fiscal analysis counters CCSC's argument that locating this Project on agriculturally zoned land will result in a declining tax revenue of \$436,152 in the second year and dropping steadily every year thereafter, which, it argues, is not in accordance with the Plan's goal to achieve an annual growth of the industrial and commercial tax base at a rate of greater than 2%. The analysis above clearly demonstrates that the proposed use will result in significantly higher revenues than the current agricultural use, despite the gradually declining revenues over the 40-year life of the Project. Further, CCSC's argument fails to consider that should the Project be decommissioned after its first 40 years' operation, the land will be returned to its original state and can be developed for another use.

Additionally, CCSC argues that the Project will cause the assessed value of bordering homes to drop, resulting in reduced real estate tax revenue from those homes.<sup>74</sup> But no clear consensus on the issue exists, nor is there any indication of the Project's negative effect on property values. If anything, according to an economic study commissioned by sPower, the surrounding property values will increase by the proposed Project.

2.2.3. *The Project has been designed to minimize detrimental impacts to neighboring properties, uses, and roadways.*

As discussed above in Section 1, sPower has designed the Project to minimize any potentially detrimental impacts to neighboring properties, including construction noise and traffic, hazardous materials, waste, and negative environmental impacts. By adopting these

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<sup>70</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at 18 (May 2018).

<sup>71</sup> *Id.* at ii.

<sup>72</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at 21 (May 2018).

<sup>73</sup> Hypothetical Residential Development of 74 Lots Contained in The Spotsylvania Solar Energy Center's Proposed Footprint, Mangum Economics at 2-3 (Dec. 4, 2018).

<sup>74</sup> Analysis of sPower SUP's Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 2 (Nov. 7, 2018).

measures, the Project complies with the Plan's recommendation that renewable energy facilities minimize their detrimental impacts.

*2.2.4. The Project maximizes the use of existing infrastructure and public facilities.*

The Project will maximize the use of existing infrastructure and public facilities, in particular, the existing water supply, by tapping into the water main of the nearby Fawn Lake subdivision thereby extending County water to the Project.<sup>75</sup> Contrary to citizen concerns over negative impacts on their water supply, the Project in fact, will improve distribution of their water supply, while reducing costs to the County and taxpayers.

Currently, the proposed site does not have access to the public drinking water system; however, public drinking water is available on the adjacent Fawn Lake subdivision property. The extension or connection to the public drinking water system is not prohibited and the cost of extending the public water connection would be borne by sPower. As part of its SUP, sPower proposes to use public water for construction and operation of the site by tapping into the Fawn Lake main, with supplemental use of groundwater from the Project site, if necessary. sPower would bear the cost of extending the public water system from the existing piping network to the proposed site.<sup>76</sup> Separate from the SUP, sPower has proposed to share costs entailed in improving a replacement water line to Fawn Lake and a new storage tank, which the Project requires to support proposed operations during construction. sPower's proposal not only benefits the Project, but allows the County to improve conditions in the Fawn Lake neighborhood.<sup>77</sup>

The County already had plans to accelerate water transmission to the surrounding area, specifically, Fawn Lake, because many houses in the area have water pressure below acceptable limits. sPower has proposed to accelerate the improvements by construction of the Project and share 50% of the costs of improvement.<sup>78</sup> Therefore, citizens' concerns that the project will negatively impact their water source are unfounded: rather, the project will expedite a project that has already been planned while reducing the cost to taxpayers.

Further, the new ground storage tank (again, already part of the County's future improvements) has been contemplated to be located adjacent to, or in the Fawn Lake subdivision. The ground storage tank would act as an additional reservoir and used to correct remaining deficiencies in the water system, including increasing marginal pressures in the zone. sPower has proposed a 50% cost share for the onsite tank, which would be conveyed to the County at the completion of construction.<sup>79</sup>

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<sup>75</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 33 (Dec. 12, 2018).

<sup>76</sup> Appendix B, Utilities Memo, Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 41 (Dec. 12, 2018).

<sup>77</sup> Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 7 (Dec. 12, 2018).

<sup>78</sup> Appendix B, Utilities Memo, Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 42 (Dec. 12, 2018).

<sup>79</sup> Appendix B, Utilities Memo, Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 43 (Dec. 12, 2018).

Once the project is operational, water supply will be minimal and only used to annually clean the panels and periodically for landscaping. It is estimated that a maximum of 2 acre-feet of water per year would be needed during operation—not the 8 million gallons of water as stated by citizens. Additionally, due to the design of the panels, they can operate at high efficiencies when covered with varying amounts of dust, pollen, and other organic matter and the abundant rainfall in the area is sufficient to clean the panels without using the Project’s water supply.<sup>80</sup> This greatly reduces the need for water onsite and will reduce the Project’s consumption of water during operations.

Not only do citizens complain that the Project will negatively impact their water supply, but they argue that it conflicts with the Plan and could open up the land to a backdoor rezoning to industrial or commercial, since County water would already be available. And, they argue, because the Plan encourages complementary land uses in agricultural areas, industrial uses are inappropriate. As the basis for this argument, the citizens argue that extending County water to the Project clearly violates the intent of the Plan’s Primary Development Boundary guidelines, which state that a major aim of the Plan’s planning process is ensuring that the provision of community facilities is phased with demand and that one of the most effective tools for directing the timing and location of new development is the establishment of a primary development boundary to define the area within which public water and sewer utilities will be provided. The citizens cite the Plan’s requirement that rezonings outside of the PDB desiring to connect to public sewer and water should submit a Plan amendment.<sup>81</sup> Even though the Project does not require a rezoning, but only a SUP, citizens argue that the same analysis and application of the Plan should apply.

But the citizens’ argument fails. First, they assert that only complementary uses, not industrial, are encouraged in agricultural areas. But renewable energy facilities have explicitly been deemed a complementary use by the County Code, despite their industrial character. Thus, it is irrelevant whether allowing the Project will “open up the land to a backdoor rezoning” because the use is already expressly permitted by County ordinance.

Second, citizens’ argument that development outside the Primary Development Boundary should be phased with demand and should be accompanied by a Plan amendment is misplaced—amendments to the Plan are required only for *rezonings* outside of the Primary Development Boundary, not for SUPs. This demonstrates that the County is concerned that rezonings might undermine the County’s development plan and alter that plan completely. Seeking approval for a SUP does no such thing: it merely seeks approval for that which is already considered an appropriate use within the existing zoning.

Finally, the Project affirmatively helps the County achieve one of its principal goals regarding the provision of public facilities and utilities. That goal is to provide community facilities and services to serve existing and new development in an efficient and cost effective manner, and to provide a sufficient water distribution system to serve the needs of the

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<sup>80</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 4.6.

<sup>81</sup> Analysis of sPower SUP’s Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 5 (Nov. 7, 2018).

community at the most economical price possible.<sup>82</sup> One of the ways the county's aims to achieve this goal is by providing for a cost sharing program with developers to fund water improvements.<sup>83</sup>

It is already established that the County's water distribution system to the Fawn Lake subdivision and surrounding area is deficient and therefore, that the County is falling short of its goal of providing a sufficient water system to this area. The Project would accelerate the County's plans to correct deficiencies in water pressure to the surrounding homes, thereby improving the distribution system at a significantly reduced cost to the County and taxpayers. Thus, the Project improves the County's distribution system.

In conclusion, citizens have not raised a compelling argument for not extending County water to the Project. And they completely overlook the benefits the Project bestows on the current water system for the surrounding area.

*2.2.5. The Project encourages the most appropriate use of land, water, and resources.*

*2.2.5.1 The Project will not adversely affect the Property's agriculture use.*

The Plan's goals for the County's natural resources include mitigating the impact of development upon unique and/or endangered resources, including rare species; encouraging land development practices which minimize impervious cover to promote groundwater recharge and/or tree preservation; and promoting multiple uses of forested land where appropriate such as outdoor recreation, wildlife habitats, and timber harvesting.<sup>84</sup> The plan also encourages location of land uses where their tolerance is compatible with existing or proposed noise levels and/or reduces impacts through vegetative buffering or building design.<sup>85</sup> As discussed below, the proposed Project achieves these natural resource goals.

As a preliminary matter, and one which has raised considerable citizen concern, is the Project's impact on the site's existing agricultural and silviculture values. The Plan has emphasized that prime agricultural and forestry lands should be preserved and protected from development, and encourages preservation of this land for its intrinsic economic benefits.<sup>86</sup> Special use permits are discouraged for land uses incompatible with adjacent agricultural, silvicultural, or forestal operations that would have an adverse effect on the continued viability of these uses.<sup>87</sup> As such, extension of public infrastructure into productive agricultural and silvicultural lands is discouraged, except in those instances where those areas are designated for future commercial, industrial, or office development.<sup>88</sup>

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<sup>82</sup> Comp. Plan, Public Facilities Plan at 2.

<sup>83</sup> *Id.* at 20.

<sup>84</sup> Comp. Plan, Natural Resources Plan at 2–3.

<sup>85</sup> *Id.* at 3.

<sup>86</sup> Comp. Plan, Land Use at 4.

<sup>87</sup> *Id.*

<sup>88</sup> Comp. Plan, Introduction & Vision at 5.

According to the County, approval of the Project will result in loss of significant silvicultural acreage on lands historically used for the forest products industry, affecting approximately 3,500 acres of the site, which represents 2.3% of the forestland in the County.”<sup>89</sup> But even while noting its concern over this forestal fragmentation, the County notes that this has largely already occurred due to the timbering of the property.<sup>90</sup> And the County has admitted that this loss of agricultural and silviculture industry is not just limited to this Property, but is also true of much of the surrounding area.<sup>91</sup> Tellingly, the County concedes that nothing assures that in the absence of the Project, the land will revert to forestry or agricultural uses.<sup>92</sup>

In short, the County has concluded that the proposed project ultimately results in a trade-off between County interests in maintaining agricultural and forestry versus support for renewable energy generation, which is seen as a complementary use within agricultural and rural areas.<sup>93</sup>

Given this tradeoff, and because the proposed Project does not adversely impact the agricultural landscape any more than any other future development would, and because renewable energy projects are encouraged, the loss of silvicultural acreage on the Property is not sufficient reason to halt the Project. Concerned citizens argue that although the Plan encourages complementary land uses such as renewable energy generation in agricultural areas, the Project’s sheer size makes it an uncomplementary land use. They argue that this property was previously used for forestal purposes and that use is now no longer available and the utility scale solar plant is not mutually supportive of agricultural use and will likely degrade the property for future agricultural land use. What the citizens fail to consider is that nothing in the Plan (or County Code for that matter) requires that a renewable energy facility be mutually supportive of agricultural use: the two uses are complementary, not contemporaneous, and therefore, need not occur simultaneously. Nor does the Plan require a property used for this complementary purpose to someday revert back to its original use.

As already noted, although the site is zoned for agricultural use, renewable energy facilities are specifically allowed with a special use permit in these districts. Thus, the proposed Project is not incompatible with the adjacent land uses, and by identifying renewable energy as a complementary use to agricultural and rural land use, the County has already anticipated that these uses will result in an industrial use, thereby warranting the extension of public facilities to the Project.

Notwithstanding this misinterpretation of the Code and Plan, sPower’s Project actually does allow for future reversion of the land back to agricultural use, while currently mitigating the loss of the current agricultural use. Specifically, as discussed below, sPower has plans to preserve and offset potential negative impacts related to the Property’s natural resources, erosion and stormwater, viewsheds, wildlife, and trailways.

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<sup>89</sup> Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 27 (Dec. 12, 2018).

<sup>90</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 35 (Dec. 12, 2018).

<sup>91</sup> *Id.* at 36.

<sup>92</sup> Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 28 (Dec. 12, 2018).

<sup>93</sup> *Id.* at 29.

2.2.5.2. *The Project will protect natural resources.*

sPower is taking significant steps to protect the Property's natural resources during construction and operation of the Project. It is accomplishing this by preserving and protection the sensitive environmental features of much of the green space outside of the solar development area.<sup>94</sup> This accords with the County's preference that developers preserve existing trees and tree buffers rather than replacing mature vegetation with new plantings.<sup>95</sup> Although citizens argue that the Project directly conflicts with the desire to preserve the rural character of the county, the County has already determined that rural corridors and the Property's scenic character can be maintained through vegetative screening and buffering.<sup>96</sup>

Further, the Project is being designed to avoid impacts to wetlands and all panels and equipment will be located outside the wetlands and preserve a minimum 100-foot buffer from wetlands. Any temporary impacts to wetlands during construction will be limited.<sup>97</sup> Any herbicides used to limit growth to grasses and other low-lying vegetation around the solar panels will be nontoxic and in accord with the Department of Environmental Quality's regulations.<sup>98</sup>

Concern has been raised that the project might cause negative impacts on streams on and near the Property, including potential water quality degradation, water withdrawal concerns, and impacts from invasive species.<sup>99</sup> To alleviate these concerns, all streams on the Property that are impacted by the Project have 50-foot designated Resource Protection Area buffers surrounding them as well as other erosion and excessive runoff control measures.

Further, a thorough analysis of potential impacts to natural heritage resources and threatened and endangered species has been conducted. The analysis noted that the Property is a potential site for several threatened or endangered species (the dwarf wedgemussel, the northern long-eared bat, the yellow lance, and the small whorled pogonia), but ultimately concluded that no critical habitats exist within the site.<sup>100</sup> Thus, the Project will not adversely impact existing habitats.

2.2.5.3. *The Project will preserve and create adequate viewsheds.*

In addition to the environmental preservation measures taken above, sPower has also designed the Project with the goal of shielding it from neighboring properties by installation of vegetative buffers or berms within setbacks at locations that are not immediately adjacent to residences and residences and roadways for screening purposes. It does so in part, as a response to the County's concern that the Property's topography may result in visibility of the facility

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<sup>94</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 30 (Dec. 12, 2018).

<sup>95</sup> Comp. Plan, Land Use at 3.

<sup>96</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 34 (Dec. 12, 2018).

<sup>97</sup> Spotsylvania Solar Energy Center FAQs.

<sup>98</sup> *Id.*

<sup>99</sup> Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 35 (Dec. 12, 2018).

<sup>100</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 2.1.3.1.

from some properties, despite efforts made to keep the facility out of sight from neighboring properties.<sup>101</sup>

Citizens wrongly believe that sPower intends to remove all trees, including buffers, right up to the property lines in most cases, which they argue conflicts with the Plan's policy requiring that wherever possible, existing trees and tree buffers should be preserved rather than replacing mature vegetation with new plantings.<sup>102</sup> They also argue that sPower has failed to minimize the Project's detrimental impact by only proposing 100 foot setbacks for almost the entire project. The citizens are incorrect. The Project actually has designed setbacks of 150 to 400 feet from property lines, vegetated berms ranging from 6 to 8 feet, and 100 foot vegetated visual buffers around property. Therefore, the actual plan does preserve the existing tree buffers, where possible, and setbacks at locations that are not immediately adjacent to residences and roadways (areas adjacent to forested lands) will be preserved for natural regrowth.<sup>103</sup>

*2.2.5.4. The Project's erosion plan far exceeds County and statewide regulations.*

Not only has sPower taken multiple steps to mitigate potential adverse impacts of the Project, but its erosion plan goes well beyond County and statewide regulations.

First, erosion and stormwater control will be managed through sPower's already approved Stormwater Management Plan and implementation of its Best Management Practices, which will require among other things, detention ponds and replanting of native vegetation, to be put into place prior to construction.<sup>104</sup>

Additionally, sPower has significantly revised its grading plan to reduce the amount of grading and earthwork previously proposed. And the project will be phased with only 400 acres open and active at any one time in any one watershed. CCSC has argued that sPower has failed to mitigate the Project's detrimental effects, stating that heavy rains and stormwater runoff will present serious risks to surrounding properties and wetlands if simultaneous 400-acre plots are developed as proposed. But this argument is speculative and not based in fact, as the Project will not actually be simultaneously developed, but rather developed in phases, with more than adequate stormwater and erosion safeguards put into place prior to construction.

In sum, sPower's erosion plan goes well beyond County and state regulations, is consistent with the Chesapeake Bay Preservation Act and related regulations, and is adequate to mitigate any detrimental environmental impacts.<sup>105</sup>

*2.2.5.5. The Project will protect the Property's existing wildlife.*

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<sup>101</sup> Staff Report for SUP 18-0002, Planning Commission, County of Spotsylvania, at 14 (Dec. 12, 2018).

<sup>102</sup> Analysis of sPower SUP's Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 6 (Nov. 7, 2018).

<sup>103</sup> Generalized Development Plan Narrative, SPower SUP for Center A, at 4.10.

<sup>104</sup> Spotsylvania Solar Energy Center FAQs.

<sup>105</sup> Comments of the Department of Environmental Quality Concerning the Application of Pleinmont Solar, LLC at 24.

Not only has sPower established protocol to preserve the Property's natural resources and environment, but it has also taken steps to reduce potential adverse impacts on wildlife. To that end, sPower hired an independent consulting firm to research and survey the existing wildlife and habitats within the site. The research concluded that the Property contains no endangered species. For the existing wildlife, open spaces will be preserved during operations and the security fencing at the site will include wildlife supportive fencing every 2,000 feet along a fence line perimeter, which will allow wildlife to safely navigate through the site and will assist in increasing overall wildlife interconnectivity.<sup>106</sup>

Citizens argue that the Project's potential impact to wildlife indicate that this proposal is not a complementary land use.<sup>107</sup> But this concern is speculative and not rooted in fact: the research has not demonstrated that any wildlife will be negatively impacted by the Project, and should they in fact experience adverse effects, sPower has already taken measures to ensure that wildlife can move freely throughout the site.

*2.2.5.6. The Project accords with the County's Trailways Master Plan.*

Spotsylvania County has adopted a Trailways Master Plan ("Trailways Plan") to provide a framework around which a comprehensive trailway system can evolve, both presently and in the future, with the overarching goal of developing non-motorized travel that will link neighborhoods, parks, schools, and businesses, as well as link and protect historic and cultural resources.<sup>108</sup> The Trailways Plan identifies several goals, objectives, and strategies to use in developing this integrated trailways system.<sup>109</sup> Those strategies include reviewing proposed development proposals for compliance with existing and proposed trailways and roadway improvements, including assuring that new developments will not negatively impact existing trails or further hinder development of new ones. Additionally, all land-use decisions must stimulate private sector development and public transportation improvements that are consistent with the County's desired trails network.

The County has recommended that the Project align with the Trailways Plan's goals. Several proposed trails would run through the Project: Todd's Tavern Spur, Lake Anna State Park Connector Trail, Po River Trail, and Virginia Central Rail Trail. All of these proposed trails lie outside the panel layout areas and therefore will not compromise implementation of the Trailways Plan.<sup>110</sup> There are two sections of fencing just north of West Catharpin Road where the fence encroaches upon a potential future trail, but sPower will work with the County to develop a plan for this section of the trail to ensure that the Trailways Plan is not impeded in any way.<sup>111</sup>

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<sup>106</sup> Spotsylvania Solar Energy Center FAQs; Appendix A, Comprehensive Plan Analysis, Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 35 (Dec. 12, 2018).

<sup>107</sup> Analysis of sPower SUP's Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 4 (Nov. 7, 2018).

<sup>108</sup> Spotsylvania County, Virginia Trailways Master Plan at 6 (Feb. 22, 2011).

<sup>109</sup> *Id.*

<sup>110</sup> Additional GDP Details, sPower Response to Comments, Round 1 (June 11, 2018).

<sup>111</sup> sPower Response to Comments, Round 4 (Oct. 28, 2018).

2.2.5.7. *The Project Preserves the Property's historic and cultural resources.*

sPower will preserve the historic and cultural resources on the Property in accordance with the findings of a survey of the Property.

The Plan encourages and promotes the voluntary protection and preservation of scenic, historic, cultural, architectural, and archaeological resources by, among other things, promoting agricultural land preservation and protection of the County's rural farm and forest characteristics; and by promoting and protecting agriculture as the primary use of land in rural areas to promote the scenic character and economy of the area.<sup>112</sup>

Further, the Plan encourages developers to identify historic and cultural resources in proximity to proposed rezoning or special use projects and to evaluate the impacts of the project on the resources in question. Where appropriate, developers should also consider appropriate architectural treatment, transitions, or buffering between development projects and national or state historic register sites to prevent or minimize degradation of the historic property.<sup>113</sup>

The Project will be designed to avoid impacts to civil war battlefields or other cultural and historical resources in accordance with the results of an independent study, coordinated with Virginia's Department of Historic Resources.<sup>114</sup>

The research from that survey concluded that although the site is surrounded by features and landscapes representing the Civil War, there are no identified historical resources specifically related to the Civil War. However, a number of other important historic and cultural resources do exist on the site, including Native American sites, ruins, gold prospecting or mine sites. And the oldest lode gold site in Virginia, the White Hall Mine, is located to the southeast of the Property.<sup>115</sup>

Nevertheless, none of the historic or cultural resources have been recommended eligible for either the Virginia Landmarks Register or the National Register of Historic Places.<sup>116</sup>

Additionally, two known places of burial lie on or near the project site: one is an offsite cemetery immediately adjacent to the project area and one cemetery is potentially onsite. The northern cemetery is accessible via an improved road at Chancellor Meadow Lane; the second cemetery is located in a wooded area surrounded by wetlands and does not have traditional access. But after consulting with an Easement Specialist from the Commonwealth Heritage Group, sPower concludes that it is not required to improve access to the cemeteries or establish easements or any other legal right of ways.<sup>117</sup>

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<sup>112</sup> Comp. Plan, Historic Resources Plan at 3.

<sup>113</sup> *Id.* at 4.

<sup>114</sup> Spotsylvania Solar Energy Center FAQs.

<sup>115</sup> Email from Lorrie Coiner to Patrick White (Apr. 24, 2018).

<sup>116</sup> Staff Report for SUP 18-0003, Planning Commission, County of Spotsylvania, at 9–10 (Dec. 12, 2018).

<sup>117</sup> Cultural Resources, sPower Response to Comments, Round 1 (June 11, 2018); *see* Va. Code § 57-27.1.

CCSC argues that the Project poses a threat to the historic resources because of the conversion of the land into an industrial or commercial use.<sup>118</sup> Yet this is not one of the Plan’s criteria for determining whether or not historic and cultural resources are preserved by proposed development. Rather, the Plan encourages developers to identify and preserve these resources where they occur and to minimize degradation of the property. Nothing in the Plan states that the mere conversion of land into industrial or commercial use automatically threatens historic and cultural resources. Rather, the goal of preserving these resources should be evaluated in tandem with the Plan’s goals of promoting business and economic growth.

As the extensive actions of sPower have demonstrated, the Project meets multiple significant goals of the County’s Plan—despite the fact that it is not a binding requirement for proposed development—and the County’s and citizens’ concerns have been carefully and thoroughly addressed. And as will be discussed next, not only has sPower complied with the County’s requirements, but it meets the Commonwealth’s larger goal for expanding solar energy.

### **3. The Project helps the Commonwealth achieve its goal of expanding solar energy.**

Not only does the Project advance the County’s general and specific goals of supporting renewable energy, but it also advances the Commonwealth’s stated goal of achieving at least 3,000 MW of solar and wind resources by 2022.

Under Virginia Code section 67-201, the Division of Energy of the Department of Mines, Minerals, and Energy is tasked with creating a 10-year energy plan. The current version of this plan promotes solar energy, asserting that the solar industry has the potential to assist “significant economic development,”<sup>119</sup> and aspiring to achieve at least 3,000 MW of the 5,000 MW of solar and wind resources deemed in the public interest by 2022. The plan also includes recommendations to double the Commonwealth’s renewable energy procurement target to 16% by 2022. This plan reinforces the General Assembly’s 2015 legislation that deemed 500 MW of solar resources in the public interest, and its further expansion of that public interest goal to reach 5,000 MW of utility-owned and utility-generated wind and solar resources.<sup>120</sup>

The Commonwealth’s goal for renewable energy reflects the changing need of customers, and the growing demand of corporate energy customers who are requesting access to greater levels of renewable resources.<sup>121</sup> Noting this shifting demand, the Energy Plan recognizes that Virginia is slated to embark on a period of accelerated renewable energy development, which will increase the obligations of local governments and state agencies tasked with land use, permitting, and environmental decision making.<sup>122</sup> And not only will the shifting demand towards renewable energy accelerate the growth of that industry, but it lends itself to economic prosperity through increased jobs and environmental health. As a result, the Energy Plan recommends that solar energy should be streamlined to reflect the changing nature of the

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<sup>118</sup> Analysis of sPower SUP’s Compliance with County Comp Plan, Concerned Citizens of Spotsylvania County 2–3 (Nov. 7, 2018).

<sup>119</sup> Va. Energy Plan at 9 (2018).

<sup>120</sup> *Id.* at 12.

<sup>121</sup> *Id.*

<sup>122</sup> Va. Energy Plan at 14 (2018).

renewable energy industry and create a path for fast-tracked permitting for projects that meet certain requirements or standards.<sup>123</sup>

The Project directly squares with the Energy Plan's aspirations and allowing the Project will bring the economic prosperity the Commonwealth desires. For example, Virginia currently ranks 10 out of 50 states in terms of electricity consumption, and only 81% of that demand is being met by in-state utilities independent producers and other sources. This means that Virginia had to import 19% of its energy, thereby exporting jobs, wages, and economic output.<sup>124</sup> Further, Virginia lags behind national trends in the wind and solar categories.<sup>125</sup> But allowing development of the Project would aid in attracting other high-tech industries to the County, due to the frequent partnership between these corporations and solar facilities, which would create new jobs and wages while promoting technology-driven economic development. Already in Spotsylvania County, data centers are becoming a key component of regional economic development. This Project would only add to those gains.<sup>126</sup>

### **Conclusion**

It is only natural that the County and local population is concerned over the introduction of a large solar facility into Spotsylvania County and concerned over the potential harmful effects of its operations and the loss of the County's pastoral qualities. But those concerns are largely rooted in fear of the unknown and the unfamiliarity with renewable energy facilities. As has been demonstrated in the discussion above, sPower has taken great pains to dispel the myths and misunderstandings surrounding an operation of this kind, and has gone above and beyond state and local requirements to mitigate the potential negative impacts of the Project. What remains is for the County and its citizens to recognize the great economic and fiscal boon a solar facility would bring to the area and to recognize their responsibility to help contributing to the creation of sustainable energy.

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<sup>123</sup> *Id.* at 15.

<sup>124</sup> The Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center Would Make to Spotsylvania County, Mangum Economics at 2 (May 2018).

<sup>125</sup> *Id.* at 5.

<sup>126</sup> *Id.* at iii.