

Background

Alliance for the Shenandoah Valley supports the development of solar energy as a zero-emissions, local, renewable source of power.

Distributed solar, in which the energy is used on-site for a business, farm, home, school, or community, is a proven way to meet localized energy demands without the need for additional transmission lines and associated infrastructure.

Utility-scale installations, in which the power is sold onto the grid, will also play an important role in the state's energy mix. In the past few months, several utility-scale solar installations have been proposed in our service area, prompted by the declining cost of solar panels, the rising demand for green energy, and renewable energy requirements in 2018 state legislation.

As with all development, consideration should be given to context and local community planning documents. Impacts to local communities- including agriculture, scenic and historic resources, planned future growth, and risks to water quality- must be carefully considered in siting decisions. Localities need clear standards and requirements that consider the appropriateness of sites as well as requirements for new or upgraded transmission lines and other infrastructure. Ideally, utility-scale solar installations would be located on brownfields or other previously developed or degraded lands.

Recommendations for Utility-Scale Solar Siting

Localities should require utility-scale solar applicants to obtain a conditional or special use permit. Utility-scale solar facilities are industrial facilities and should not be allowed by-right. Given their size and potential impacts, they should be subject to a Conditional or Special Use Permit. This process allows for an assessment of the impacts and, where warranted, conditions that mitigate those impacts. If severe impacts cannot be mitigated, the proposal should not go forward. Avoidance of sensitive resources can eliminate the likelihood of a severe impact.

Localities should develop a siting criteria policy document. A siting criteria policy should be guided by the values/resources that are important to citizens, often well-defined within Comprehensive Plans. The document should cite potential impacts to citizens, conflicts with county resources, and mitigation measures, with clear expectations and standards

Below are some of the areas that should be addressed in any policy.

1. **Avoidance of Impacts to Agricultural Soils and Uses**

Utility-scale installations should be considered in conjunction with local planning documents and, in general, should be discouraged on land that contains federally-designated prime agricultural

soils and soils of statewide importance. Approved installations, and their annual maintenance, should not negatively impact the future use of the site for agriculture. Grading and fill should be avoided. If any grading is required, it should not result in the loss of agricultural soils. Topsoil should be removed from the area to be graded, stored on site and replaced after the grading is completed. Compression mats should also be employed to avoid compaction of soils. Impervious surfaces (beyond that associated with the panels) should be minimized or avoided.

2. Avoidance of Historic, Cultural and Scenic Resources

In the wrong location, utility-scale solar installations could be viewed as a scenic nuisance and run counter to a locality's pursuit of historic resource protection and tourism associated with historic and scenic assets. Impacts to scenic resources (byways, rivers, overlooks, etc.) and historic districts/resources and gateways should be considered and addressed in any development of siting criteria. The locality could consider establishing distance requirements from known resources (battlefields, register properties, historic districts, etc.) and require a site specific analysis of viewshed impacts.

3. Erosion Control and Stormwater Management

Strong enforcement of erosion and sediment control regulations during construction is essential. Localities should also seek environmental site design approaches that will meet or exceed state standards for slowing, capturing, and treating stormwater runoff. Developers should provide for how they will maintain any stormwater best management practices over the full life of the project. Solar installations maintenance procedures should strive to minimize any potential groundwater contamination.

4. Removal of Infrastructure

Utility-scale solar facilities are ground-mounted systems that include materials above-ground and below the surface. In order to protect the future agriculture use on the property, infrastructure should be removed at the end of a facility's useful life, including all surface and subsurface elements. Sites should be returned to pre-construction condition. To ensure proper site restoration, localities should require that projects are fully bonded, just like any other major construction project.

5. Transmission Impacts

Localities should understand the scope and scale of any transmission and/or substation upgrades associated with the project. The impacts of new or upgraded infrastructure-- such as viewsheds and erosion and sediments control, should be assessed along with the impacts of the facility.

6. Continued Agriculture or Habitat

Proposals that retain some agricultural use of the property should be encouraged. For example, some utility-scale solar projects allow for continued grazing (generally sheep), hay and/or crop growing in conjunction with the installation. As well, some communities are requiring the establishment of native meadows as a way to increase habitat, including pollinator plants, and decrease the need for herbicide and mechanical clearing.