Confronting the Issues

Commercial Solar Energy Consideration for Farmland

PFB Policy Development
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Issue

As utility (large-scale) commercial solar projects become more prevalent in Pennsylvania, increased focus is being given to long-term policy decisions such as what types of land are best suitable for these projects, whether and how to incentivize development on such lands, and landowner protections during the entire project lifespan.

Questions

1. What types of land are best suitable for utility-scale solar projects?
2. Should incentives, and if so, what type, be provided to encourage solar development on lands identified as being "optimal" for utility-scale solar projects?
3. Should amendments to existing farmland programs, such as Clean and Green or Farmland Preservation, be enacted to ease or restrict utility-scale solar project on such lands?
4. Should incentives or protections be enacted to ensure the project is properly decommissioned, and how should decommissioning be defined?
5. Should incentives be developed to allow utility-scale solar projects to upgrade existing projects as solar technology becomes more efficient?

Background

Improved solar efficiency technology, lower capital costs, and a shift towards renewable energy sources in general have led to significant increases in utility solar projects across the country and in Pennsylvania. As of October 2020, Penn State Extension estimates that statewide 255 utility scale solar projects are under plan review with the regional transmission organization, 17 projects are in the design phase, 3 projects are under construction, and 7 projects are operational. Given the large land footprint needed to make these projects economically viable, lower transaction costs of negotiating with fewer landowners, and generally lower land-tax expenses in rural areas, farmland has become the prime target for many utility-scale solar projects. While some landowners will undoubtedly benefit financially from allowing farmland to be used for utility-scale solar, the footprint and long-term length (often 50 years) of these projects raises important societal questions about how best to balance the need to preserve prime farmland and the associated community and aesthetic benefits provided by agriculture with allowing these projects to have viable economic pathways for both developers and farmers.

Broadly speaking, there is a general agreement that, ideally, utility-scale solar projects should be placed on marginal or non-prime farmland. Several alternative sites such as brownfields, marginal or conservation-based farmland, and non-operational energy plants have been identified as ideal candidates to host utility-scale projects, but the ease and increased efficiency of utilizing productive farmland has led solar developers to primarily seek farmland for use. If there is a continued desire to place these projects on such "marginal" lands, potential remedies include providing tax incentives or dedicated funding to developers and landowners to encourage utilizing such lands, identifying whether government-owned land is proper and viable for utility-scale solar, easing liability concerns and streamlining environmental testing required for many industrial-related sites, and even outright prohibition of certain land types being allowed for utility-scale solar. Relatedly, farmland enrolled in various preferential programs such as Clean and Green and Farmland Preservation are explicitly prohibited or subject to financial consequences regarding utility-scale solar. Whether these prohibitions and restrictions should be strengthened or modified will affect how the solar industry develops in Pennsylvania.

Apart from the conceptual questions of where these projects should be located and whether to incentivize such development, questions related to how and even if these projects should be decommissioned are relevant. For instance, although decommissioning is often focused on the actual solar equipment installed, other aspects such as newly built access roads and ensuring the land is once again suitable for agriculture are important aspect of decommissioning. Additionally, beyond what decommissioning should encompass and who should bear the costs, some advocate that a holistic view of decommissioning should consider encouraging developers to remain and upgrade existing projects, which, in turn, will reduce the overall foot print of utility-scale solar, thereby preserving more farmland. Whether and how to incentivize such actions is an open question.

Farm Bureau Policy

PFB, page 12, Energy Alternatives

We recommend companies who lease land for solar and wind energy projects be required to pay decommissioned bonds that cover all of the disposal costs for equipment once it is no longer useful or operational. (’19)

We recommend Pennsylvania close its borders to outside Solar Renewable Energy Credits and raise the solar requirements. (’15)

PFB, page 29, Agricultural Land Preservation

We recommend preserved farms be allowed to produce and harvest energy (windmills, solar, methane digesters, natural gas wells, etc.) without penalty provided minimal preserved acreage is impacted. (’15)

PFB: page 31, Legislation and Programs Impacting Municipalities:

We recommend: Municipalities be prohibited from banning private use of solar panels, windmills and clotheslines.

PFB, page 59, Clean and Green Act Administration

We recommend the Clean and Green Act allow the use of clean and green land for commercial alternative energy production, with roll back taxes only imposed on the area used for such purposes. (’15)

AFBF, page 143, Solar Energy

11.1. We support:
11.1.1. Solar energy generation as a component of the nation’s energy portfolio;
11.1.2. Establishment of state standards for commercial solar energy conversion systems that protect private property rights and allow for reasonable development of projects;
11.1.3. Ensuring adequate funds are in place for decommissioning;
11.1.4. Allowing landowners the option of terminating a solar lease agreement if solar panels fail to produce energy for a period longer than 12 consecutive months; and
11.1.5. Efforts to locate solar energy projects on marginal or underused lands.
11.2. We oppose giving public utility status to solar energy or solar energy development companies.