
Key Takeaways

- Contracts leasing farmland for solar use can be complicated and could benefit from structured guidance and language for farmers and municipalities.
- Solar technology provides a source of stable revenue for farmers and can diversify farming income.
- Only 5 percent of municipal zoning codes provide guidance on large-scale solar development.

The following are highlights of testimony presented at the October 1, 2021, Center for Rural Pennsylvania public hearing on Solar Development in Rural Pennsylvania. The Center's Board of Directors conducted the hearing to learn more about solar development in terms of land use policies, project implementation, and solar panel decommissioning.

Policy Approaches to Solar Development

The first group of panelists included Tom Murphy from Penn State Extension, Professor Mohamed Badissy of Penn State Dickenson School of Law, and Michael Roth from the Pennsylvania Department of Agriculture. Panel members focused on current approaches to solar development in Pennsylvania.

Mr. Murphy provided recent counts on large-scale solar production in the commonwealth. Currently, there are eight solar facilities considered "utility-scale" in Pennsylvania. Three of those provide energy specifically for Penn State University through a power purchase agreement and have been operational for less than two years. The panelists discussed the lack of clear guidance to municipalities on how zoning and leasing policies affect solar development. Professor Badissy noted that only 5 percent of the 2,560 municipality zoning codes include guidance on utility-scale solar projects. The panelists noted that rural communities need assistance with the land transition process, and said that work needs to be done to establish trust and understanding in local communities to make solar development a sustainable and productive process.

Much of the discussion of this panel also centered around the degree to which solar development could affect farms participating in Pennsylvania's farmland preservation program. Mr. Roth noted that one of the benefits of solar projects is that the land on which they are built can be returned to farmland, a practice that is often not possible with other forms of land development. Even so, he noted that the Pennsylvania Department of Agriculture maintains that solar development should be focused on impervious surfaces and less productive agriculture land, rather than prime farmland.

Panelists also discussed the lessons on best practices in complex contracting that can be applied from the natural gas industry, such as allowing for agricultural uses in addition to solar development. The panelists agreed that it is beneficial to start these conversations early and encouraged state government to provide clear guidance and best practices for landowners before they sign lease agreements.

Considerations When Beginning a Solar Project

The second panel included Brian Ross from the Great Plains Institute, Daniel Brockett from Penn State Extension, and fourth-generation dairy farmer Paul Mason. The focus of this discussion was policy considerations at the onset of a solar project.

Mr. Ross discussed a number of considerations that local communities should take to ensure that their communities are prepared to benefit from market-driven solar development. He also suggested a number of resources provided by the Great Plains Institute and other affiliated organizations, including a solar certification from SolSmart that municipalities can pursue.

Mr. Brockett briefly discussed lease agreement prices, which range from \$300 to \$3,000 but are most often between \$1,000 and \$1,200 per acre in the Commonwealth. He noted these prices are likely to exceed profits for many staple crops and pastures and provide a much more stable source of income than other farming commodities. This point was emphasized by Mr. Mason, who has converted approximately seven acres of difficult-to-cultivate land on the Maryland portion of his farm into a solar array. While he noted that he needs almost all his land to feed and sustain his dairy production, the small solar array has allowed him to diversify his income with a "fixed return, zero capital expense" investment. While community-scale solar projects such as this are currently not permitted in Pennsylvania, Mr. Mason mentioned that he has a lease option for more land in Pennsylvania if projects at that scale are allowed.

When asked about Pennsylvania's Clean and Green program and the back taxes that would be owed for developing his land with solar technology, Mr. Mason mentioned that a term of his lease agreement was that the solar developer would be responsible for paying those fees.

Considerations When Decommissioning a Solar Project

Panelists in this group focused on financial considerations around the decommissioning of panels and included Ariane Benrey of the New Jersey Board of Public Utilities, Bruce Burcat of the Mid-Atlantic Renewable Energy Coalition, Scott Elias of the Solar Energy Industries Association, and Andrew Williams of Sol Systems LLC.

Ms. Benrey began the panel by presenting information on New Jersey's renewable energy programs, including the development of a new incentive program associated with many solar stakeholders in the state.

Mr. Burcat and Mr. Elias discussed the seriousness with which solar developers are approaching building partnerships with farmers and other landowners. Mr. Burcat included examples of decommissioning regulations in a number of different states, including a report from the North Carolina Department of Environmental Quality, Texas Senate Bill 760, and West Virginia Senate Bill 492.¹ Mr. Elias discussed the creation of New York State's *Solar Guidebook*, which includes a chapter on the decommissioning of solar panels for local governments, but does not mandate decommissioning as a state.² They encouraged the creation of model agreements and best practices that could be used to protect landowners from being saddled with the cost of removing solar equipment in the case of developers going out of business or otherwise abandoning the properties. Trust funds, bonding and letters of credit were presented as possible options for securing funding to protect landowners.

Panelists also discussed the relative merit of salvage value as an offset on decommission costs and how a siting board may be an option to streamline the permitting process. Panelists encouraged working with the solar industry to create decommissioning procedures that place the risk on developers without creating financial burdens that could slow solar growth.

¹North Carolina Report, Solar Energy: NC Department of Environmental Quality Releases HB 329 Decommission Study: <https://farmlaw.ces.ncsu.edu/2021/01/solar-energy-nc-department-of-environmental-quality-releases-hb-329-decommission-study/>.

Texas Senate Bill 760: <https://legiscan.com/TX/text/SB760/id/2406298>
West Virginia Senate Bill 492: https://www.wvlegislature.gov/Bill_Text_HTML/2021_SESSIONS/RS/signed_bills/senate/SB492%20SUB1%20ENR_signed.pdf.

² New York State's Solar Guidebook for Local Governments: <https://www.nyserda.ny.gov/-/media/NYSun/files/solar-guidebook.pdf>.

Thank you to the following individuals who attended the hearing and provided testimony: Thomas Murphy, Penn State Extension; Mohamed Badissy, Penn State Dickinson School of Law; Michael Roth, Policy Director, Pennsylvania Department of Agriculture; Brian Ross, Vice President for Renewable Energy, Great Plains Institute/SolSmart Advisor; Daniel Brockett, Penn State Extension; Paul Mason, Fourth Generation Dairy Farmer and Farm Bureau Member; Ariane Benrey, Policy Analyst, Division of Clean Energy, New Jersey Board of Public Utilities; Bruce Burcat, Executive Director, Mid-Atlantic Renewable Energy Coalition; Scott Elias, Senior Manager of State Affairs, Solar Energy Industries Association; and Andrew Williams, Vice President of Policy & Corporate Affairs, Sol Systems, LLC.

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