American Farmland Trust

# Expanding Smart Solar Siting While Protecting Farmland

America needs to expand renewable energy development, much of which will occur on agricultural lands. But new solar panels and wind turbines should not be sited on our most productive and resilient farmland. AFT is pursuing "smart renewable siting" that guides solar development onto land where it has the least impact on agriculture and the environment. We can accelerate the expansion of renewable energy generation and cut greenhouse gas emissions while maintaining our regional food systems.

Northeast states have set ambitious goals for reducing greenhouse gas (GHG) emissions and dramatically increasing the generation of renewable energy. In August 2017 nine Northeast states recommitted to the Regional Greenhouse Gas Initiative (RGGI) and agreed on a proposal to cut global-warming pollution from the region's power plants an additional 30 percent between 2020 and 2030. To achieve these goals, states have set renewable energy targets that will require dramatic increases in solar and wind energy.

These efforts create opportunities for farmers and landowners to reduce their energy expenses and earn new income, but also pose threats to farmland and local food systems. Flat, open farm fields, often the most productive farmland, are highly desirable for solar siting due to ease of access and fewer cost to clear vegetation and construct facilities. Most of the utility-scale solar projects have been proposed on farmland, many on land with the most productive prime soils. At the same time, solar leases can generate valuable income and smaller scale solar panels often can be sited on farm buildings and under-utilized land. The challenge is with large, utility-scale solar electric generating facilities and not with smaller, projects that primarily generate electricity for on-farm use.

This new pressure compounds the severe "competition for land" in the Northeast including traditional demand for sprawling residential development, expanded local food production, and increased renewable energy, which has a larger land footprint than carbon energy. The recently completed New England Food Vision calls for building the region's capacity to produce at least 50% its food, which would require three times as much land producing food in the future. In addition, expanding solar energy will consume significant amounts of additional land. In New York, for instance, National Renewable Energy Laboratory estimated meeting Governor Cuomo's goals would require over 33,000 acres of solar generation.

The good news is that to meet these goals it is not necessary to convert our most productive farmland and sensitive environmental lands to utility-scale solar facilities. New research is documenting that states and regions can more than meet their ambitious solar energy goals on

marginal and developed land without sacrificing its productive farmland and sensitive wildlife habitat.

But fears that large areas of farmland could be converted to solar panels have been heightened in recent years as private solar companies sent offers to tens of thousands of landowners across the region. These fears, conflicts, and uncertainties have led to delays and even moratoria on constructing new solar facilities in some localities. This ultimately works against expanding clean energy, reducing costs, and combatting climate change.

The solution is *smart solar siting* that maximizes potential renewable energy while minimizing impact on the Northeast's most productive farmland and other resources. Successful examples of this approach across the country include identifying "least conflict" land, i.e., lands preferable for solar siting and steering large-scale commercial solar siting to those areas such as industrial zones, municipal landfills, other developed land, or less productive agricultural land. This requires mapping of the state's most productive, versatile, and resilient farmlands and limiting siting on those lands.

Unfortunately, information and guidance on solar siting on farmland is fragmented and does not provide local officials what they need to develop policies and understand implications of approving siting permits. The rush to site facilities, driven by federal and state financial incentives, is occurring without comprehensive state policies on renewable energy development and environmental protection and without integration into comprehensive municipal land use planning. This can lead to unintended consequences such as conversion of valuable and sensitive lands as well as delays in approvals for siting permits. It also can expose municipalities to legal challenge and the burden of addressing applications in a laborious, piece meal fashion.

To address this challenge, AFT co-sponsored a workshop "Siting of Renewables on Farmland—Finding a Balance Between Protection and Profitability" on December 1, 2017 in Enfield, CT with over forty representatives invited from eight Northeast states. Participants shared information, practices, and experiences, identified what is working and where there are challenges, and laid out next steps for research and networking. The presentations and discussion demonstrated the divergence in approaches between states and the need for more sharing. Participants identified the following as the most critical research and analysis needs:

- analyses estimating the demand for land to satisfy renewable energy targets and types of lands that could achieve those goals;
- overlay mapping to isolate "least conflict" lands;
- identifying best practices; and

- establishing a clearinghouse for policies, guidance, and technical assistance for officials, landowners, and farmers.

In response, American Farmland Trust, Acadia Center, Conservation Law Foundation, Vote Solar, and Vermont Law School launched a joint two-year project seeking to reduce conflicts over siting of solar facilities by reaching agreement among multi-stakeholders on smart solar siting principles, policies, and programs.

This project offers a consensus-based, solutions-oriented approach to a problem that, if left unaddressed, will significantly impact the region's ability to meet its climate goals. To date, partners have successfully convened stakeholders from all sectors, completed detailed review of state energy needs, policy analyses, land use research, and evaluated equity impacts of solar siting - assessing each New England State's potential to meet climate and solar generation goals while protecting the region's best farm and forest land.

Research summaries, policy analyses, and additional resources from the first year of this project will be made public shortly. Project partners are currently working towards the following project outcomes:

- Create multi-stakeholder group of organizations across New England from key sectors including agriculture, conservation and clean energy, who are committed to working together to support smart solar siting regionally and within their states;
- Generate better understanding among policy makers, influencers, and advocates, of the benefits of smart solar siting and the potential to meet solar energy goals while still protecting farm and forest land;
- Inform new and revised state policies and programs that reduce conflicts and tensions by clarifying and streamlining the planning and approval process for siting of solar facilities on farm and natural lands;
- Establish clearinghouse of information including compendium of data, resources, analyses, practices in policy and programs, model ordinances, guidance, and case studies.

There is no single solution to the solar siting challenge. Smart solar siting requires a range of policy approaches at the legislative, regulatory, and community level. With smart solar siting we can accelerate the expansion of renewable energy generation and cut greenhouse gas emissions while maintaining our natural and working lands.

AFT is a trusted convener and advocate for farmland protection, agricultural viability, conservation, and renewable energy. Together with farm leaders, environmentalists, and energy entrepreneurs we can promote smart solar siting to help address climate change, expand renewable energy while protecting our farmland and environmentally sensitive lands.

For more information visit https://farmland.org/project/smart-solar-siting-partnership-project-for-new-england/