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October 30, 2020

Patrick Woodcock, Commissioner  
Massachusetts Department of Energy Resources  
100 Cambridge Street, #1020  
Boston, MA 02114  
**By Email at [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov)**

RE: SMART ASTGU Guideline Comments

Dear Commissioner Woodcock:

On behalf of Mass Audubon, I submit the following comments on the Straw Proposal for modifying the *Guideline Regarding the Definition of Agricultural Solar Tariff Generation Units (ASTGU)*.

**Context: Climate Change Initiatives, Solar, and Land:** As noted in previous Mass Audubon comments on the DOER SMART solar incentive financing program, we strongly support the rapid development of clean, renewable energy, including solar. Climate change is a serious threat to both people and nature in Massachusetts and globally. We need to green the grid, and solar power is a vital component of this transition to meet the goal of Net Zero by 2050. At the same time, DOER needs to tailor these incentives to avoid conflicts with other important state goals and initiatives, including the policy recommendations of the Global Warming Solutions Act Implementation Advisory Committee, State Hazard Mitigation and Climate Adaptation Plan, Resilient Lands Initiative, Healthy Soils Action Plan, and Massachusetts Forest Action Plan as well as longstanding efforts by the Executive Office of Energy and Environmental Affairs (EEA) to prioritize and protect lands of high conservation value. We renew our request for DOER to undertake an open and participatory planning process for solar siting in Massachusetts, designed to align the goals of the SMART program with other related state initiatives, and with input from all interested stakeholders and the public. Analytic studies like those performed by NJ and RI to identify the amount and locations of already developed lands and other lands most suitable for solar development should be undertaken as part of this process.<sup>1</sup>

In the meantime, the recent changes to the Solar Massachusetts Renewable Target (SMART) regulations moved in the right direction by limiting eligibility for projects within Priority Habitat for state-listed rare species and BioMap2 Core Areas and Critical Natural Landscape (hereinafter “sensitive lands”). However, those regulations do provide exceptions for Category 1 projects, which are still allowed to qualify within the sensitive lands. One of the project types in Category 1 is ASTGU. Therefore, expanding this part of the program by loosening the guideline for ASTGUs will result in an increase in conversion of these sensitive lands to solar arrays. **The ASTGU program should be treated as the experiment that it in fact is. The scope of this program should be limited and results carefully documented and publicly reviewed.**

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<sup>1</sup> <https://www.nj.gov/dep/aqes/solar-siting.html>

The solar incentive program is contributing significantly to development pressures on land. Between 2012 and 2017, about 6,000 acres of natural and working lands were converted to ground-mounted solar arrays<sup>2</sup>. This was one-quarter of all new development and a significant factor in overall land use trends at a time when the importance of protecting these lands for climate resilience and other values is coming into sharper focus. Agricultural land -- so important for local food production, is under continuing pressure from various forms of development, and incentives for large scale ground mounted solar add to those pressures. Agricultural land in Massachusetts decreased by almost 86,000 acres from 1997 to 2017<sup>3</sup>. Farmers are under intense financial pressures. It is vital that a program intended to help support them through these solar subsidies not unintentionally increase the rate of loss of farms, farmland, or productivity, nor of sensitive forested lands. **This program must be treated as a pilot program with limited scope and careful oversight.**

As proposed, ASTGU projects could be built on prime farmland, unique farmland, and additional land of statewide importance. The land would not need to be in current agricultural use to qualify. Sensitive lands that are currently forested or in other natural cover could be cleared and built upon with minimal requirements for actual farming underneath the panels. There are situations where farmers are considering selling land not in production for housing development, and dual use solar may be a potential alternative in some such instances, if the site is not prime soils or sensitive lands. However, it is important to note that there are many locations where forested lands on farms are not suitable for housing (ledge, shallow or tight soils, high groundwater, not economic in the local market, etc.). The available choices are not limited to developing for housing or for solar. There are often other options such as selling conservation restrictions, sustainable forestry, or limited development in appropriate portions with an open space design that permanently protects the most sensitive lands while providing income for the landowner.

**Dual use solar agriculture is still experimental.** Little is known about whether or how this approach will work with the farm products and practices currently occurring on Massachusetts farms, nor has any analysis been provided regarding how this approach would relate to the Massachusetts Food System Collaborative Plan or local needs and markets.

**Recommendations:** Mass Audubon requests that at a minimum the following safeguards be put in place:

**Impose size limits on projects and a limit on the overall capacity of the ASTGU program,** treating it appropriately as a pilot for this experimental approach to land use. A project size limit such as the proposed 2 MW limit per project is appropriate. Limits based on a percentage of the overall farm property are not appropriate because this would unfairly disadvantage smaller farm owners, although safeguards still need to be incorporated to protect prime and other important agricultural soils and sensitive lands. Incorporate additional safeguards to prevent gaming the system by industry-financed purchase, leasing, or subdivision of land and the use of shell corporations to circumvent the size limit.

**Ensure that the program actually helps farmers stay in farming,** and is not merely a financial incentive for solar developers to gain access to sites on sensitive lands that are otherwise no longer eligible. Additional safeguards are needed for projects involving new “farm” entities that are not presently involved in farming, and for conversion of forested lands on existing farms to solar. At the same time, we recognize that there is a need to foster new farms, sited to avoid significant impacts to sensitive lands. Appropriately scaled solar, on the least productive, least sensitive portion of a property, should be allowed as an ancillary use within farms. We support the continuation of allowing farms to have solar arrays of up to 200% of their energy need capacity (stand alone, separate from ASTGU), although an upper limit size should be established to avoid incentives for development of new, highly energy-intensive forms of farming.

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<sup>2</sup> *Losing Ground: Nature's Value in a Changing Climate*, Mass Audubon, 2020. [www.massaudubon.org/losingground](http://www.massaudubon.org/losingground)

<sup>3</sup> <https://ag.umass.edu/resources/massachusetts-agricultural-data/acres-land-in-farms>

**Protect farmers who rely on leased land** for all or part of their farming. Safeguards need to be put in place to ensure that landowners are not incentivized to not renew leases with farmers and instead switch to other forms of land management that technically qualify as agriculture but do not support the needs of existing farmers or the state’s food production priorities. For example, many dairy farmers are already operating on the edges of financial viability, and rely on leases of fields from other landowners for hay. If those landowners find it more profitable to switch to ASTGU and eliminate the availability of the land for leasing to local farmers for hay production, this may drive the lessee farmer out of business. Similar concerns may apply to other forms of farm production. More information and analyses are needed on the types of farming currently occurring, how ASTGU incentives will change that, what kinds of production are actually viable in dual use, and what the results will be both in terms of land use and food production.

**Shading:** Consider reducing the maximum shading allowed to below 50%, if the data shows that this is necessary to produce good yields of agricultural commodities typically produced in Massachusetts. There is insufficient information available presently on production of various crops under solar arrays in this region, and some evidence from other locations that the amount of shading allowed may need to be lowered (e.g., 32% in Japan).

**Establish a transparent reporting and analysis program** to evaluate and adjust the program over time. The pre-construction Farm Plan should be based on standardized templates with measurable goals, including target yields. Reporting requirements should be more than an annual report to the state. DOER should work with UMass Extension and DAR to establish a coordinated approach to gathering data on how the program is working across various categories of farm production (e.g., livestock, hay, row crops of different types). All information gathered from these projects, including the initial Farm Plan and subsequent reports and remedial actions, should be publicly available.

**Public Transparency and Input:** The Straw Proposal refers to “stakeholder input” received in preparing this proposal. We were unaware of any stakeholder input process. Information should be disclosed on which entities were consulted. An open, transparent, and inclusive public input process should be developed to review the entire SMART program with the goal of developing a statewide solar incentive plan that is in harmony with other state environmental programs and goals.

**Include safeguards in case projects fail to meet the targeted agricultural production goals.** Provide an orderly process for modifications of the agricultural operations and, if necessary, the solar array. The program should be designed to ensure sufficient rigor in the project planning and review process. The application should establish reasonable expectations that farming goals can be met. If those goals are not met, and cannot be quickly remediated, provisions should be in place to withhold the ASTGU payments. The program should avoid setting projects up to fail, nor should it allow projects to remain qualified for “dual use” if they are not in fact producing minimum yields of agricultural projects. The Farm Plan should include consideration of possible risks such as weather, disease, and insects, and specify how short-term agricultural setbacks will be addressed to ensure the site remains in actual dual use or is withdrawn from the program. The approval process must include contingency plans for such situations.

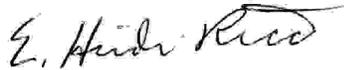
**The third-party certification entity must be both qualified and independent,** with no conflicts of interest. We suggest that UMass Extension be the preferred entity, given their extensive knowledge of farm practices, yields, and related topics. Fees for this service need to be collected from the project owners and must be sufficient to reimburse UMass Extension’s actual costs. The certification must not be an unfunded mandate.

**Pollinator Habitat Certification** – MassWildlife and the Natural Heritage and Endangered Species Program should provide input on the standards for planting and maintaining pollinator habitat. While this is a separate incentive from ASTGU, the two may be combined on projects where beekeeping is proposed for the agricultural component of dual use. Results should be monitored and reports made public, with periodic reviews.

**Conservation Restrictions and Chapter 61:** Mass Audubon opposes the revision or revocation of conservation restrictions or agricultural preservation restrictions to allow the development of solar arrays. For properties enrolled in Chapter 61, there must be robust safeguards to ensure the *primary* use remains agriculture or forestry. Commercial scale solar arrays should not generally qualify for Chapter 61. These are profitable energy production facilities and should not receive property tax breaks intended for land dedicated solely to forest or agricultural use.

Thank you for considering these comments.

Sincerely,

A handwritten signature in black ink that reads "E. Heidi Ricci". The signature is written in a cursive style with a prominent flourish at the end.

E. Heidi Ricci  
Director of Policy