



September 27, 2019

Judith Judson, Commissioner
Massachusetts Department of Energy Resources
100 Cambridge Street, 10th Floor
Boston, MA
02114

Re: Solar Massachusetts Renewable Target (SMART) Program 400 Megawatt Review

Dear Commissioner Judson,

The American Farmland Trust, Conservation Law Foundation and Vote Solar (Conservation Solar Parties) respectfully submit the following detailed comments and recommendations on the proposed reform and expansion of the Solar Massachusetts Renewable Target (SMART) Program. Together, we represent several unique perspectives on this issue and a united commitment to protection of our critical lands, species and agriculture alongside the accelerated growth of solar.

I. Introduction

The Conservation Solar Parties appreciate the opportunity to comment on the Massachusetts Department of Energy Resources' (Department) significant proposal, made public on September 5th and presented at several public hearings around the Commonwealth, to adapt the SMART program, and are grateful for the obvious hard work and deep thought that went into this proposal from yourself and the staff at the Department. However, we are concerned that this proposal is expansive and complicated and stakeholders have not been given enough time or information to formulate a thorough response.

We are encouraged to see the Department attempting to address issues that we share concern over. Namely, we are supportive of the intent to ensure continued solar growth, to protect critical forest, agricultural and other environmentally significant lands, and to encourage accelerated development of solar on developed land or through dual-use with agriculture. These are admirable and urgent goals. We hope you will consider our comments on how best to pursue these goals.

II. Data Collection, Release and Analysis Needed

In order to properly address these concerns we need a thorough accounting of the current status of solar projects and development, broader constraints on our lands, and the impediments to the types of solar projects and siting we desire. Very little data on these subjects appears to exist at and have been analyzed by the Department, let alone shared publicly with stakeholders to allow diverse analyses. The Conservation Solar Parties understand the desire to act quickly to address constraints on the solar market and concerns about

development of solar on forest and agricultural lands, but this proposal includes solutions where problems have not been properly identified and illuminated.

Going forward, the Department should undertake a thorough data collection exercise to learn: A) exactly where solar projects have been built and are being proposed; B) the characteristics of the lands being developed; C) the project economics of solar sited on different types of land and with different characteristics, such as dual-use with agriculture; and, D) the local review processes being utilized by municipalities across the Commonwealth. Upon receipt of that data, it should be made public, with some level of aggregation or anonymization to protect individuals and companies, so that stakeholders can undertake their own analyses and draw their own conclusion. In addition, the Department should pursue its own analyses of this data, in consultation with stakeholders. This should then lead to a more thorough stakeholder engagement process to co-design solar siting policies that are nuanced to deal with the realities of solar development, land conservation and agriculture in Massachusetts.

III. Establishment of a Solar Conservation Fund Instead of Land Use Subtractor

While the Conservation Solar Parties are not working with thorough data and analysis of solar development and land conservation impacts, we do believe that the SMART land use regulations and guidelines can be improved in the interim. One fundamental change we think will improve land use policy within the SMART program is the establishment of a Solar Conservation Fund as a means of mitigating any potentially deleterious impacts on the lands of the Commonwealth. In lieu of a subtractor applied to the SMART compensation rate, solar projects on certain types of land or locations would be required to make a substantial payment to the Solar Conservation Fund to mitigate their land use.

The use of mitigating payments to fund conservation efforts is by no means a new concept and is often employed in energy and other forms of development nationwide. The Solar Conservation Fund could be used to permanently conserve lands, as opposed to the more temporary impact of solar development.

The Solar Conservation Fund should be managed by a state agency or outsourced to a third party to responsibly use money collected to mitigate the specific conservation impacts of solar development, using the more thorough data collection we urge the Department to pursue. This could include purchase of lands by public entities or trusteeships for permanent conservation or support of broader policies to incentivize or otherwise support local agriculture or land conservation.

IV. A Traffic Light Approach to Solar Development and Land Conservation

In order to protect our most critical lands and agriculture and encourage accelerated solar development on more marginal land, the Conservation Solar Parties propose some improvements to the categories currently proposed in the SMART program. The classification system, which is detailed below, is designed to be easily instituted through updates to existing Department regulations and guidelines. Our framework relies largely on geographic information

system (GIS) layers that were in part generated using satellite data and sampling, and were not designed or prepared for this type of regulatory use. As such, we do propose that solar developers be given the ability to appeal their site designation if they can prove an egregious error in the layers or change in the nature of the land since the layer was last updated.

As reflected in the diverse array of perspectives that the Conservation Solar Parties bring to this issue, we believe that this approach has the potential to achieve broad consensus among conservation groups, solar developers, and other key stakeholders. For example, the Nature Conservancy and several individual solar developers has expressed support for this general approach and provided input. This traffic light approach provides the opportunity to protect critical lands in the Commonwealth while ensuring robust solar deployment. We welcome the opportunity to work with the Department to engage stakeholders and refine this proposal.

The classification system is designed to fit with the Department's existing category-based land use classification under SMART. For ease of understanding, we have created Red, Yellow and Green designations:

RED LIGHT (Category 4): A project site in these areas would be ineligible for the next tranche of available capacity under the SMART program (i.e., blocks 9 and beyond).

- Core forests and other areas with high ecological value: Projects sited on land in any of the following layers:
 - All components of BioMap2 Core Habitat, specifically: Forest Core, BioMap2 Wetlands, Vernal Pool Core, Priority Natural Communities, and Aquatic Core.
 - For BioMap3 Species of Conservation Concern, this layer should trigger a full NHESP Priority Habitats of Rare Species review under the Massachusetts Endangered Species Act if not already underway. If the project is found to have an impact on any of Species of Conservation Concern, it would not qualify for SMART.
- Actively farmed prime farmland: Project sites on land that meets both of the following criteria:
 - Prime Agricultural Soils, and
 - Classified as “pasture/hay” or “cultivated crops” in the NLCD 2016 CONUS Land Cover GIS layer.¹
- Project sites within protected open space and other prohibited areas, including:
 - On protected open space, as established under Article XCVII of the Amendments to the Constitution, that do not meet the specific qualifying criteria of Category 1 Land Use;

¹ Note: Landowners should be given the opportunity to contest the agricultural designation by showing that agricultural activity has not occurred on the property since 2015.

- In a wetland Resource Area, as defined in 310 CMR 10.04: Definitions, not including Buffer Zones, as defined in 310 CMR 10.04: Definitions, except as authorized by all necessary regulatory bodies; and
- On properties included the State Register, as defined in 950 CMR 71.03: Definitions, except as authorized by regulatory bodies.
- Within the “Openspace by Level of Protection” GIS layer, unless the solar would comply with the allowable use on the property.
- Waiver Process
 - A waiver process will be made available for project sites with Active Long-term Forest Management Plans, compelling rationale for incorrect inclusion within a mapped layer, or compelling case for “Ecological equivalency” to the current project site and associated ecosystem.

YELLOW LIGHT (Categories 2 and 3): A project site in these areas would be eligible for the SMART program, but would be required to pay into the Solar Conservation Fund to help mitigate impacts on higher-valued land areas.

Category 3 (Developers with a project that impacts these lands would be required to make a \$10,000 per acre Solar Conservation Fund contribution):

- Project sites on areas designated “Farmland of Statewide Importance” that have recently been farmed (i.e, located in “pasture/hay” or “cultivated crops” in the NLCD 2016 CONUS Land Cover GIS layer).
- Projects located in areas identified as “Prime Forest 1” other than those identified as RED (above).
- The following components of BioMap2 Critical Natural Landscape (Landscape Blocks, Wetland buffers, Aquatic Buffers, and Coastal Adaptation Areas).

Category 2 (Developers with a project that impacts these lands would be required to make a \$5,000 per acre Solar Conservation Fund contribution):

- Project sites on Prime Agricultural Soils that have not been recently farmed (i.e., not located in “pasture/hay” or “cultivated crops” in the NLCD 2016 CONUS Land Cover GIS layer).
- Projects sited in Prime Forest layers other than “Prime Forest 1”
- Farmland of Unique Importance that has recently been farmed (i.e., located in “pasture/hay” or “cultivated crops” in the NLCD 2016 CONUS Land Cover GIS layer).
- Project sites according to solar zoning ordinance: Projects that would otherwise be Category 3 that are sited within a solar overlay district or on land that complies with established local zoning that explicitly addresses solar or power generation as an as-of-right use, or a use approved through site plan review and special permits.

- Forest projects with minimal tree-clearing: Projects located in Prime Forest 1 that would otherwise be designated Category 3 requiring the clearing of less than 5 acres of forest.

GREEN LIGHT (Category 1 and Location-Adder Projects):

Low-value land (Category 1): Projects sited in the following areas would be eligible for SMART without any additional qualifications.:

- Any areas not identified as “RED” or “YELLOW.”
- Disturbed land, defined as any land on which waste materials have been deposited or from which significant materials have been removed for commercial or industrial purposes.

Adder Projects: Projects in the following areas or with the following characteristics would be eligible for SMART incentives regardless of location and would receive adders to overcome higher costs associated with siting solar in these areas. No conservation fees would be required for these projects.

- Building mounted.
- Carports.
- Brownfields.
- Landfills.
- Agricultural Dual Use Canopies.

Beyond these improved categories, we recommend the following updates:

- De minimis exceptions: For projects that include YELLOW land types of an area no greater than 2 acres or 10% of the total project area (whichever is the lesser area), will YELLOW land types would be treated the same as GREEN. No such exception will be made for RED land types.
- Pro-rated conservation payments: Payments to the Solar Conservation Fund would be pro-rated based on the proportion of each project site that is located in each YELLOW subcategory (e.g., if only a portion of the project is located in the YELLOW category and the rest is GREEN, the developer only pays an amount based on the acreage that is located in the YELLOW area).
- Projects spanning multiple categories: Projects spanning multiple categories would make Solar Conservation Fund payments pro rata based on the number of acres of the project located in each category.
- Project Site Definition– the limits of work necessary to construct an array and associated improvements.

- The use of Chapter 61A and similar provisions is not recommended – as this program functions primarily as a tax abatement program, rather than an indicator of land value or use. Whether a project is located in land formerly classified as Chapter 61, 61A, or 61B should be irrelevant for purposes of the SMART program.

V. Improve the Agricultural Dual Use Canopies and Building Mounted Adders

The Conservation Solar Parties hope that revisions to the SMART program can not only constrain solar development on lands of particular conservation or agricultural importance, but also encourage development of solar where and how we most want it. As such, we request that DOER, in consultation with MDAR, engage in a specific stakeholder engagement process around making improvements to the building standards that address specific types of agricultural land uses. Additionally we have the following specific recommendations to the Agricultural Dual Use Canopies and Building Mounted adders.

The Agricultural Dual Use Canopies adder should be modified to:

- Require continued agricultural activity to maintain the dual-use adder;
- Remove the size restrictions (both the existing 2MW AC cap, and the proposed 2.5MW DC cap), as land under dual-use is still in agricultural production, thus mitigating concerns regarding loss of farmland or food production capacity;
- Maintain the 50% shading requirement, as opposed to increasing it, as different forms of agricultural production require different levels of sun and may in fact benefit from shading; and,
- Modify dual used canopy structure requirements to be adaptable to different types of agricultural production (e.g. grazing activity which does not require as much clearance under the panels as crop production might).

The Building Mounted adder should be strengthened, or supplemented with other Department efforts, to account for the increasing challenge of finding suitable roof space for solar as solar adoption increases. Solar developers are increasingly finding rooftops that need to be completely replaced or significantly improved in order to host solar, which makes project economics untenable under the current adder. An increase in the adder, the establishment of a 're-roofing adder' for rooftops that need replacement or significant improvement, and/or coordination with energy efficiency programs that could help offset re-roofing costs would help to offset this problem.

VI. Expansion of the Capacity of the SMART Program

Recognizing that solar development delivers tremendous value to the Commonwealth's environment, health and economy, the Conservation Solar Parties recommend expanding the SMART program by an additional 3,200 megawatts (MW). We believe the expansion of the SMART program, with the above adjustments to land use policy within the program, is a

conservation and agricultural imperative. This is based on the solar power needed to meet our clean energy requirements and a step on the path to what is required to address global climate change.² The adoption of the above recommendations to improve land use impacts of solar development through the SMART program will ensure a net positive conservation impact from additional capacity. In addition, climate change poses one of the gravest threats to our most precious lands and species and our agricultural industry.

VII. Conclusion

The Conservation Solar Parties urge the adoption of our recommendations as soon as practicable, to better protect our precious lands and species, maintain our agricultural industry and soils, and accelerate the growth of clean, local solar power. However, we also hope that the Department will promptly begin a process to collect more data on the SMART program and invite more stakeholder engagement to analyze that data and make further improvements to the SMART program as quickly as possible.

We are grateful for this opportunity to comment on the Department's SMART Program 400 MW Review Proposal and look forward to continued engagement with you as this proposal moves forward. Please do not hesitate to reach out to us to discuss our recommendations or the Department's proposal further.

² Vote Solar. (2019). *Clouds Over the Solar Industry in Massachusetts*. Retrieved from <https://votesolar.org/usa/massachusetts/updates/report-massachusetts-solar-policy-falls-short-climate-mandate/>