



October 13, 2021

Commissioner Patrick Woodcock
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020, Boston, MA 02114

Re: Borrego Comments on Updates to SMART Guidelines

Dear Commissioner Woodcock,

Borrego Solar Systems, Inc. (Borrego) appreciates the opportunity to provide comments on the recent updates to the SMART Program Guidelines. Borrego is in agreement with the comments submitted by the Coalition for Community Solar Access (CCSA), and would like to submit a few additional comments.

Energy Storage Guideline

Borrego supports the changes proposed in the Energy Storage Guideline that would ensure that AC- and DC-coupled systems are compensated equally. We are eager for DOER to publish the fixed transformer and inverter efficiency factors as soon as possible so that we can incorporate this true-up calculation into projects currently being financed.

Statement of Qualification Reservation Period Guideline

We support and appreciate DOER's change to section 10, *Application Review Following the Completion of a Group Study or Affected System Operator Study*. This change appropriately acknowledges that a single group study may include projects that have been stuck in the interconnection process for years alongside much more immature projects that have only recently entered the queue. While they will all be eligible for ISAs at the same time, the incentive block position they receive should reflect their relative maturity.

However, we have one additional edit to suggest. The current guideline states that "Applications will be ranked first by the executed ISA date, then by the date of the ISA application." The remaining issue, as we noted in our previous comment on this guideline, dated Mar 5, 2021, is that projects in the same group study may be issued ISAs at the same time, and project owners may all submit signed copies back to the utility at the same time, and yet they may receive countersigned, fully executed ISAs with different dates simply due to administrative processing times at the utility. Similarly, while projects become eligible for ISAs at the same time, the utilities may process the paperwork in a random order and therefore different companies may even receive executable ISAs on different dates in an order with no relation to project maturity. We do

not believe it was DOER's intent to have projects' incentive block positions be dependent upon the random order in which a utility may process ISAs. **In order to maximize the fairness and objectivity with which projects are assigned a block position, we recommend that DOER assume that all projects participating in a given group study have the same ISA date, and therefore rank projects by the date of ISA application only.** This would eliminate any possibility for unfairness based on the potential for different ISA administrative processing times by the utility for projects in the same group study.

In addition, we appreciate DOER's intent in pausing application processing for a five-day period in order to rank applications fairly. However, with the changing regulatory landscape surrounding the group study process, including (but not limited to) the DPU determination in docket 20-75 that projects currently in group study will have to complete an adjudicatory proceeding following the completion of each study, it is far from clear when exactly that five-day window should start. We would greatly appreciate an opportunity for further discussion between the industry, the EDCs, and DOER regarding when is the most appropriate time to pause application processing in order to accommodate projects that have been in a group study.

Land Use, Siting, and Project Segmentation Guideline

We would like to commend DOER for its addition to section 8(a) of the Land Use guidelines, creating an opportunity for discretion as to whether a particular site meets the definition of agricultural land in the SMART regulations. The Important Agricultural Farmland GIS layer is an important tool for determining whether a solar installation would remove farmland from productive use, but this guideline change appropriately acknowledges that it should not be the final word in all cases. The GIS layer is based on soil survey data that in many areas is decades old, and it aggregates soil samples taken at specific points to larger areas, creating the potential for inaccuracy. In practice, we have found that there are often locations that were categorized as Important Agricultural Farmland several decades ago, but in the intervening years have been excavated as gravel pits or in other ways permanently altered, yet new soil samples have not been taken for purposes of classification (and subsequent update to the GIS database). These sites may be exactly the kinds of locations where solar is the highest-and-best use, but without a discretionary determination they would be ineligible to participate in SMART or would be subject to greatly decreased incentive levels.

The land use section of the SMART regulations (20.05(e)1) assigns projects to categories based on whether they are sited on "Land in Agricultural Use" or "Important Agricultural Farmland." Those terms are further defined in section 20.02:

- "Land in Agricultural Use. All land as defined under M.G.L. c. 61A, §§ 1 & 2, and land that had been enrolled in a program established pursuant to M.G.L. c. 61A within the past five years."
- "Important Agricultural Farmland. Means those soils found to be Important Farmlands pursuant to 7 C.F.R. § 657.5, that includes prime farmlands, unique farmlands, and additional land of statewide importance."

Massachusetts Chapter 61A Section 1 and 2 define “land in agricultural use” as that which is “**primarily and directly used** in raising animals”¹ and “land in horticultural use” as that which is “**primarily and directly used** in raising...foods for human consumption, feed for animals...nursery or greenhouse products...or forest products under a certified forest management plan.”² The emphasis was added to highlight that in order to be defined as “land in agricultural use” under M.G.L. c. 61A, the land must *be currently being used* for agricultural purposes (or have been within the last 5 years), not merely *have the potential to be used* for agricultural purposes.

With respect to the definition of “Important Agricultural Farmland”, the referenced federal regulations include specific criteria that soils must meet to be considered “prime farmlands”, and defers responsibility to the states for defining “Unique Farmland” and “Farmland of Statewide Importance”. The Natural Resources Conservation Service of the United States Department of Agriculture further provides specific soil criteria to define “Farmland of Statewide Importance”, and defines “Unique Farmland” as those lands suitable for cranberry cultivation.³ We have attached the most recently-updated definitions for all three categories provided by NRCS at the end of this comment for reference; this document was accessed on the NRCS website at the link in the footnote below. These criteria are highly specific and objective, dealing with soil characteristics such as pH, permeability, water table, and prevalence of rocks and stones.

To avoid the administrative burden and developer uncertainty that results from discretionary review processes, we strongly recommend that DOER establish a standardized determination process using the published NCRS definitions for Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. If the land is not currently in agricultural use as defined by M.G.L. c. 61A and has not been within the last 5 years, a straightforward determination of non-agricultural land should be made if project developers submit a report from a third-party environmental engineer demonstrating that the soils on the site in question do not meet the NCRS criteria for any of the three categories of Important Agricultural Farmland.

Thank you for making several welcome changes to the SMART Program Guidelines as detailed above, and for considering our suggestions for additional minor, but important, updates. We appreciate the opportunity to offer our input and look forward to continued dialogue.

Sincerely,

Jessica Robertson
Director of Policy and Business Development, New England
Borrego Solar Systems, Inc.

¹ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIX/Chapter61A/Section1>

² <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIX/Chapter61A/Section2>

³ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ma/soils/?cid=nrcseprd1371099>

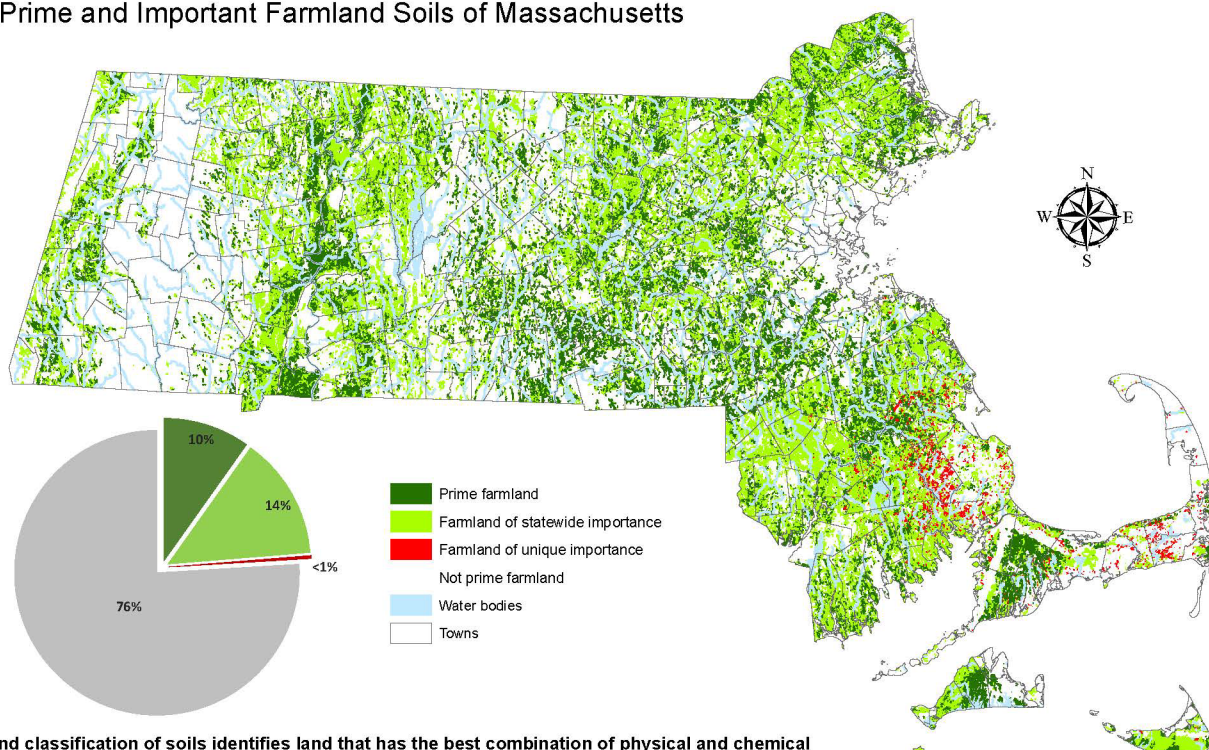
Farmland classification of soils identifies land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and oilseed crops and is available for such use.

For FY2020, Massachusetts has revisited and revised the farmland criteria for soils in the state. These changes will result in the following changes to the Farmland Class Ratings:

- 3,200 acres changed from 'farmland of statewide importance' to 'meets no important farmland class'
- 6,100 acres changed from 'prime farmland' to 'farmland of statewide importance'
- 800 acres changed from 'farmland of statewide importance' to 'prime farmland'
- 125,500 acres changed from 'meets no important farmland class' to 'farmland of statewide importance'
- 254,000 acres changed from 'farmland of unique importance' to 'meets no important farmland class'

The most significant changes include the removal of organic wetland soils that are not used in cranberry agriculture from the farmland of unique importance category and the addition of map units on 8 to 15% slopes with stony and very stony surface phases to the farmland of statewide importance category.

USDA Prime and Important Farmland Soils of Massachusetts



The farmland classification of soils identifies land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and oilseed crops, and is available for such use.

Maps and further information can be found at <https://websoilsurvey.sc.egov.usda.gov> and <https://www.nrcs.usda.gov/wps/portal/nrcs/main/ma/soils/>

Farmland classification of soils identifies land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and oilseed crops and is available for such use.

Code of Federal Regulations (7 CFR Part 657.5) important farmland criteria is applied to the predominant characteristics of soil survey map units as mapped by the National Cooperative Soil Survey and published by the USDA Natural Resources Conservation Service (NRCS) through the Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov>).

There are four farmland classes assigned to soil survey map units of Massachusetts:

Prime Farmland

Prime farmland soils have specific physical and chemical characteristics that make them well suited for growing crops. Criteria for the prime farmland classification in Massachusetts are:

- available water capacity of 3.5 in (8.9 cm) or more¹ within a depth of 40 in (1 m) or the depth to an impermeable layer if less than 40 in (1 m); and
- pH between 4.5 and 8.4 in all horizons within a depth of 40 in (1 m); and
- water table, if present, not shallower than 15 in (38 cm) during May through October; and
- infrequent (less often than once in 2 years) or no flooding during May through October; and
- the product of Kw (erodibility factor, whole soil) of the mineral soil surface and percent slope is less than 2.0; and
- permeability rate of at least 0.06 in (0.15 cm) per hour in the upper 20 in (50 cm); and
- upper 6 in (15 cm) of the soil surface contains less than 10 percent rock fragments by volume coarser than 3 in (7.6 cm) diameter; and
- not more than 0.1 percent of the soil surface is covered by stones 10 in (25cm) to 24 in (60cm) diameter, and/or boulders >24 in (60 cm) diameter; and
- less than 2 percent bedrock exposures.

Farmland of Statewide Importance

Farmland of statewide importance are those soils that fail to meet one or more of the requirements of prime farmland, but are important for the production of food, feed, fiber, or forage crops. They include those soils that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Criteria for defining this land are determined by the appropriate state agency or agencies.

¹ Available water capacity needs determined from “*Conservation Irrigation Guide for Massachusetts, 1981*”



Soils that do not meet all prime farmland criteria are Massachusetts farmland of statewide importance if the following criteria are met (bold font indicates criteria varying from that for prime farmland):

- **available water capacity of 2.0 in (5.1 cm) or more within a depth of 40 in (1 m);** and
- pH between 4.5 and 8.4 in all horizons within a depth of 40 in (1 m); and
- water table, if present, not shallower than 15 in (38 cm) during May through October; and
- infrequent (less often than once in 2 years) or no flooding during May through October; and
- **the product of Kw (erodibility factor, whole soil) of the mineral soil surface and percent slope is less than 4.2²; and,**
- permeability rate of at least 0.06 in (0.15 cm) per hour in the upper 20 in (50 cm); and
- **upper 6 in (15 cm) with less than 35 percent rock fragments by volume coarser than 3 in (7.6 cm);** and,
- **not more than 3 percent of the soil surface is covered by stones 10 in (25 cm) to 24 in (60 cm) diameter,** and
- not more than 0.1 percent of the surface is covered by boulders >24 in (60 cm) diameter; and
- less than 2 percent bedrock exposures.

Farmland of Unique Importance

Unique farmland is land other than prime farmland and farmland of statewide importance that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

In Massachusetts, soil map units suited and used for the production of cranberries have been identified as farmland of unique importance. The soil properties essential for cranberry production are unique; low soil pH, abundant supply of water, the ability to hold water, and access to a source of sand.

Not Prime Farmland

Soils that do not meet the criteria for prime farmland, farmland of statewide importance, or farmland of unique importance are classified as not prime farmland. These soils may be in agricultural use but may require more intense management to maintain high agricultural yields.

² Product of K and slope criterion based on historical precedent, MA Soil Conservation Service document, "Additional Farmland of State or Local Importance", 1/17/1986.

Massachusetts Criteria for Assigning Important Farmland Designations to Soil Survey Map Units

- Map units that meet all prime farmland criteria per CFR except the relative value data representing the predominant components reflects available water capacity of less than 3.5 in (8.9 cm) through the upper 40 in (1 m) but has sufficient available water capacity in the upper profile, are designated prime farmland. This qualifier is applicable to soil survey map unit components having moderately coarse to medium textured mantles overlying coarse textured deposits.
- Complexes and Associations - Soil map units with more than 50 percent components that meet any of the above scenarios are designated prime.

Criteria for the designation “Farmland of Statewide Importance”

- Soil map units, the predominant composition of which does not meet criteria for prime farmland and have all the following characteristics...
- available water capacity of 2.0 in (5.1 cm) or more⁴ within a depth of 40 in (1 m); and,
- pH between 4.5 and 8.4 in all horizons within a depth of 40 in (1 m) and,
- water table, if present, not shallower than 15 in (38 cm) during May through October; and,
- infrequent (less often than once in 2 years) or no flooding during May through October; and,
- the product of K_w (erodibility factor, whole soil) of the mineral soil surface and percent slope is less than 4.2⁵; and,
- permeability rate of at least 0.06 in (0.15 cm) per hour in the upper 20 in (50 cm); and,
- upper 6 in (15 cm) with less than 35 percent rock fragments by volume coarser than 3 in (7.6 cm); and,
- not more than 3 percent of the soil surface is covered by stones 10 in (25 cm) to 24 in (60 cm) diameter and,
- not more than 0.1 percent of the surface is covered by boulders >24 in (60 cm) diameter, and
- less than 2 percent bedrock exposures.

Qualifiers for data application to Massachusetts Farmland of Statewide Importance Criteria

- Where the product of K and slope percent is 4.2 or less for the lower part of an 8 to 15 percent map unit slope phase range but exceeds 4.2 for the upper part of the slope range, and remaining criteria are met, the map unit is designated farmland of statewide importance.
- Complexes and Associations - Soil map units with more than 50 percent components that meet the above criteria are designated farmland of statewide importance.

Important Farmland Soil Map Unit Designation Overriding Scenarios

Application of anomalous or non-representative data elements to important farmland criteria may result in inaccurate class placement. The consideration of the characteristics of the soil survey map unit as a whole as assessed by Massachusetts NRCS staff overrides point specific data.

⁴ Available water capacity needs determined from *Conservation Irrigation Guide for Massachusetts, 1981*

⁵ Product of K and slope criterion based on historical precedent, MA Soil Conservation Service document, “Additional Farmland of State or Local Importance”, 1/17/1986. Slope range values applied to this criterion exclude the lowest whole number in the range to separate overlap with the adjacent lower slope phase as follows: 0-3, 4-8, 9-15.

Massachusetts Criteria for Assigning Important Farmland Designations to Soil Survey Map Units

K factors and available water capacity data for the same nominal component may vary among soil survey areas resulting in different data-derived farmland classes. The characteristics of the predominant condition based on acreage extent will be applied state-wide for prime farmland and farmland of state-wide importance designations.

The following address specific scenarios where calculations based on attribute data may inaccurately place a map unit in prime farmland or farmland of statewide Importance classes. Soil map units having any of the following characteristics are precluded from important farmland designations:

- A major component that is shallow to lithic contact: complex slopes, surface stones and boulders associated with these map units, and very shallow components within these landscapes are significant limitations to agriculture.
- Slope phase range that includes 20 percent or more. Per recommendation from MA NRCS ecological sciences staff, 20 percent slope or greater is limiting for equipment operations.
- Hydric soil composition greater than or equal to 50 percent.
- Quartzipsamment composition greater than or equal to 50 percent: droughty, inherently low fertility.
- A major component of urban land and/or major component classified to level above series i.e. Udorthents.
- Map unit complexes associated with the undulating, rolling, irregular slopes of the Cape Cod terminal moraines.

Soil map units having any of the following characteristics are precluded from the designation, Prime Farmland:

- Composition of soil components in the sandy-skeletal particle size class greater than or equal to 50 percent.
- Slope phase range that exceeds 8 percent.⁶

Unique Farmland

Soil survey map units designated as Unique Farmland, are those suitable for, and have an established history of cranberry production. The Unique Farmland designation is excluded from soil survey areas with few or no lands with cranberry production.

⁶ Based on data, some map units meet Prime Farmland criteria on the lower part of the 8-15 percent slope range. About a dozen map units with available water capacity >3.5 inches and Kw of .1, .2, .15, or .17 were noted, all of which have loamy surface textures and parent material like other map units with higher Kw factors. The decision to exclude slopes greater than 8 percent from Prime Farmland is based on the preponderance of attribute data for similar soils.