

Comments on SMART 3.0 Emergency Regulations

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BIG PICTURE

The following comments are based on my best effort at reading and understanding the June 20, 2025 SMART 3.0 regulations.

From the perspective of appropriate siting, the SMART 3.0 solar subsidy regulations released on June 20, 2025 are improved over SMART 2.0. If enacted and followed at face value, these regulations can hopefully halt the poor siting that occurred throughout the Commonwealth under SMART 2.0, especially given the various loopholes, and begin to shift the deployment of large scale solar in Massachusetts towards more effectively preserving ecosystem resilience and carbon storage/sequestration and promoting greater deployment on the built environment. I hope this is the case and appreciate DOER's efforts in this direction. That said, there remain areas of concern; items that, either as written or through omission, may undercut the protective nature of the SMART 3.0 regulations. I would ask DOER to consider further strengthening the regulations following the comment period.

AREAS OF SIGNIFICANT CONCERN

Deem Ineligible or Apply Mitigation Fee for ESS Risks to Drinking Water or Fire (28.09:2)

There is a huge omission in the SMART 3.0 regulations in that they do not address the issue of potential for water contamination or uncontrolled fires, significant health and public safety concerns. Any project that has lithium-ion energy storage system located in a manner that can potentially contaminate private or public drinking sources, or where fires cannot be contained due to insufficient water supply, should be prohibited from getting a SMART subsidy or at least trigger a Mitigation Fee that is heavily weighted.

De-Link Energy Storage Co-location Requirement (28.07:4E)

If prohibition of energy storage (above) is not acceptable, then DOER should consider modifying the requirement that all solar installations over 1MW have a co-located energy storage system unless the installation is building mounted or an exemption for good cause is allowed by DOER. Even if DOER does not prohibit these installations in situations described above, the regulations should at least be modified to enable applicants to seek an exemption if a lithium-ion based energy storage system will be located within proximity or in a manner where there is a reasonable likelihood of water contamination to private drinking wells or public water supplies (wells, aquifers, or reservoirs) or where fires are possible

due to an insufficient water supply. This de-linking or exemption should apply to any size solar installation.

Not only is this substantively important from a public health and safety perspective but I would argue that the co-location requirement is a “unforced error” by DOER; it has become a primary barrier to more rapid deployment of clean energy in the Commonwealth. There are instances where solar may be appropriately sited but the requirement to have co-located energy storage triggers legitimate community concern about public health, safety and welfare. De-linking these is both a responsible and action to take to advance clean energy deployment.

Remove or Modify Energy Storage Adder (28.13:3E)

Tucked into the end of the regulations, separate from the highlighted Adders is the continuation of a Compensation Adder for Energy storage systems. This should be removed because it is currently required for systems over 1MW. Why pay more if it is required. If DOER follows my recommendation to de-link or prohibit problematic siting of ESS, an Adder should still not be offered for lithium-ion ESS since these do not contribute to better siting. However, I would support an Adder for non-lithium-ion storage to incentivize the development of alternative battery designs to encourage deployment of safer technologies similar to DOER’s Advancing Massachusetts Power LDES initiative.

Recognize Critical Natural Landscape as BioMap -Therefor Ineligible Land (28.08:2)

While MassWildlife and The Nature Conservancy, the creators of BioMap, established two longstanding categories of BioMap land, Core Habitat and Critical Natural Landscape (CNL), nowhere in their documentation does it state that one category of land is more or less important than the other. They are different in characteristics but not importance; that is why they are both included in the BioMap designation. Core Habitat identifies areas that are critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems. Critical Natural Landscapes identifies large landscape blocks that are minimally impacted by development, as well as buffers to core habitats and coastal areas, both of which to enhance connectivity and resilience.

I would suggest that while DOER acknowledged the importance of Critical Natural Landscape by including it among the categories facing a Mitigation Fee, that CNL should instead be upgraded in importance to its peer BioMap category. This would mean that any project seeking a SMART subsidy that overlaps with any BioMap designated land, including Critical Natural Landscape, would be ineligible for a SMART subsidy.

It is also worth noting that while there were giant loopholes that enabled poor siting, SMART 2.0 did state that projects with 50% or more on Critical Natural Landscape land were deemed ineligible. While removing the loopholes of SMART 2.0 was essential to achieve good siting standards, removing Critical Natural Landscape from ineligible land seems like going backwards, even if it is now disincentivized by the Mitigation Fee.

Remove Productive Agricultural Land from Dual Use Eligibility (28.07:5-B3)

In Massachusetts there are five categories that reflect the quality of agricultural land: Prime Farmland, Farmland of Statewide Importance, Farmland of Unique Importance, Farmland of Local Importance, and Not Prime Farmland. Given the increasing importance on growing food in a changing climate, DOER should prohibit SMART subsidies for dual-use except in agricultural land designated as Not Prime Farmland. The current eligibility as “Important Farmland” includes viable land that should not be compromised. I do support the use of Fallow Farmland, including fallow areas of more productive farms, for dual use. Additionally, allowing dual use projects to be eligible if they limit up to 50% of sunlight from baseline seems too great a loss of sunlight. While I am not a farmer or a scientist, it seems that given crops are dependent upon sunlight, the sunlight available on agricultural land with a dual use installation should be notably more.

NEEDS IMPROVEMENT

Clarify Source of 20% Carbon

It will be very important for applicants and the public to have a publicly accessible and easy to find and understand data source that establishes what parcels are identified as “*land with a carbon storage score in the top 20% under the Mitigation Fee Formula*”. In DOER’s December 2024 Land Use Framework the source for this information was identified as the Resilient Land Mapping Tool. Whether this is still the case or if there will be another source, clarity of what land is eligible in terms of carbon storage and what is not, is extremely important prior to any application.

Remove Dual Use and Floating Solar from Compensation Adders (28.07:5-B3 & B4)

There are two categories of solar installation that SMART 3.0 will allow to get greater compensation through the so called “Compensation Adders”, that shouldn’t be incentivized. These are Dual Use and Floating Solar.

While dual-use can be allowed with the new SMART 3.0 with additional regulatory protections and hopefully only on less productive land (see prior comments about Not Prime Farmland or Fallow Land), it is still an unproven approach in terms of its effect on crops and yield. While I believe that the annual reports for dual-use can provide crucially important data regarding the actual changes in yield over time, data DOER can assess after several years dual use implementation, DOER should not incentivize dual use without this data. Perhaps after several years of dual use operation and assessment of reported data, DOER will be in a more informed position to know whether this deployment method should be incentivized or not.

While I appreciate the necessary protections associated with floating solar that are included in SMART 3.0., this is not an ideal deployment of solar. At best it should be used in a limited manner where there is no proximity to drinking water sources. Further, if subsidies are only available to floating solar

installations with Interconnection by January 1, 2025, then there seems no point to incentivize them. Even if floating solar will be an ongoing SMART-eligible deployment type, there are enough questions and concerns about siting them, that it should not be prioritized with an Adder even if it is allowed.

Establish Stronger Public Comment Provisions (28.06:1E)

The SMART 3.0 regulations state that DOER may allow public comment on a solar project that is applying for a SMART subsidy. While the Clean Energy regulations currently being developed will have some element of public engagement, this does not mean that the SMART process should not require it. SMART subsidies enable projects to become financially viable because the Commonwealth enables them to receive subsidies; it is therefore in the public interest to require public comment on an application for a subsidy. DOER should create a process for public comment – written or via a public hearing as part of the DOER review prior to granting a Final Statement of Qualification. These comments should be reviewed and considered by the SMART Administrator.

Apply Construction Standards to All Solar Installations/ Clarify “Levelling” Language (28.08:7)

I support the Construction Standards in SMART 3.0 and see no reason to limit these environmentally prudent standards to only Dual Use or those facing a Mitigation Fee. These standards should be consistent practices for all solar installations receiving a SMART subsidy. They are best practices that DOER should promote through SMART 3.0

Additionally, there is one standard that needs further clarification. It states that “*existing leveled field areas shall be left as is without disturbance*”. I would hope that this means that there will be no significant earthmoving to create level ground where there are notable slopes, which would in turn, would create large areas of disturbed land prone to erosion and flooding. If this is DOER’s intent, it is not clear to this reader. If it is not the intent, further clarity is still needed as to what DOER means by this standard, although I would strongly argue that earthmoving to level significant areas of a parcel to ready it for a solar installation is a poor siting practice because it creates further risks.

Clarify Floating Solar (28.07:5-B4)

The regulations for Floating Solar indicate that only projects with an Interconnection Agreement that were submitted by January 1, 2025 are eligible under SMART 3.0. Since this date is in the past, this seems to imply that new floating solar projects will not be eligible going forward. If this is correct, it should be clarified. If this is not accurate, then the requirements put in place by SMART 3.0 regulations for floating solar are very important to ensure public health, safety and welfare protections regarding this type of solar deployment.

Clarify Grid Alignment Language to be More Protective (28.09:2)

Grid Alignment is among the factors that will be considered for a Mitigation Fee. As I noted in previous comments, distance to the grid can actually be the cause of poor siting. Given this, a project that receives a better Mitigation Fee rating for being closer to the grid can have the worst impacts. Currently the

regulations state *“The assessment of the long-term costs and ecological impacts of grid infrastructure build out as determined by the Department.”* If DOER is seeking to ensure that the placement of grid infrastructure is not in locations where a solar installation would otherwise be ineligible for a SMART subsidy (Core Habitat, as an example), or in cases that it is located in a manner that would trigger other mitigation fees (Critical Natural Landscape, Agriculture, Ecosystem Integrity, Carbon Storage or Cumulative Impacts), this should be more clearly stated. The current language in any case is insufficient and vague. If Grid Alignment must remain, it most certainly should continue (as Straw Poll suggested) to have the least weighting especially since the “best” score can negatively impact the other Mitigation Fee factors, all of which are much more important.

Require Environmental Monitor To Report Directly to DOER (28.08:6)

While it is great that the SMART 3.0 regulations require an environmental monitor, it should be made explicit that DOER will receive the reports directly from the monitor rather than the monitor reporting to the applicant. There needs to be a system in place to avoid monitors writing reports that downplay concerns to please applicants, since the applicants are required to pay the bills (this is similar to concerns I had regarding Cumulative Impact Assessments under the Clean Energy regulations). There is already a risk of cozy relationships since professionals who are likely to be the environmental monitors are in the same industry as the applicants. For DOER to get objective data, reporting and accountability that is not compromised, monitor reporting cannot be given to the applicant.

Additionally, while I greatly appreciate that the regulations require two site visits by the environmental monitor with the option for more by request of DOER, I would suggest the language be stronger regarding monitor visits beyond the mandatory two. “Request” seems to imply needing applicant approval. If DOER has concerns and significant funds are going to be extended to an applicant via a subsidy, then it should be required that an environmental monitor be allowed to do as many site visits as needed for DOER to feel comfortable with the project. I would suggest replacing “request” with “require”.

Tighten Definition or Application Process For Projects That Can Apply Under SMART 2.0 (225 CMR 20.05.5)

In the updated regulations for SMART 2.0 that were also released on June 20, there is an exemption that would allow a project to apply under SMART 2.0 rather than the more protective SMART 3.0. This can be exploited in the short-term. The exemption allows projects that have made “significant investment” before Dec. 31, 2025 AND that would not be eligible under SMART 3.0 regulations, to apply to DOER under SMART 2.0. While I can appreciate that DOER is trying to be fair so that developers don’t feel like there was a “bait and switch” in terms of the rules, this will likely mean that projects ineligible under SMART 3.0 with its more protective siting requirements will certainly flock to this loophole so their projects can proceed. A better approach would be for DOER to first require applicants to demonstrate how projects ineligible under SMART 3.0 can be altered to comply with the new regulations. This might mean smaller installations or slightly different siting/design but the public

interest is to get projects that are already in the pipeline to comply with the updated vision of DOER and SMART. Only if reasonable changes cannot be made and are verified by DOER might this exemption be allowed. However, it is very important that cost not be an acceptable reason for an applicant not to apply – the Commonwealth is looking for substantive improvements in siting and SMART 3.0 is the new bar that has been set.

Expand Use of Mitigation Trust Fund to Local Purposes (28.9:5)

While the creation of the Mitigation Trust Fund is excellent and the stated uses – *to support conservation, ecosystem, and biodiversity programs* – are equally good, I would suggest that DOER consider allowing an additional use – for host communities seeking funds for a local project that triggered the need for mitigation. It seems reasonable that if mitigation is needed, the effects will be felt locally and therefore local mitigation funds to address the needs are merited. This is not to say that trust funds can only be used locally but expand the allowable uses to include local mitigation at the request of a municipality.

Establish Access to and Ability to Comment on Annual Reports

While DOER may conduct audits of solar installations once in operation, as far as I can tell, only Floating Solar and Dual Use installations will be required to submit an annual report. I would suggest that all solar projects receiving subsidies should be required to submit an annual report to ensure that DOER's requirements are being met and that essential data is collected. Without annual reports how will DOER know how a solar installation is performing? Practically speaking, annual reports can serve as the basis for triggering an audit; DOER needs this initial information in order to understand if further investigation or understanding is warranted.

Additionally, all annual reports should be posted to a publicly-accessible website so that the public, and especially host municipalities can gain insight into the installation. While applicants will likely cite the need to protect proprietary information, I would suggest that if a private entity is asking for financial subsidies (regardless of the source), it must waive some of its claims at proprietary information.

Require Identification of For Low-income Off-takers Upon Application (28.07:5-C-2B)

The language and requirements regarding off-taker projects to low-income communities/households are better in SMART 3.0 since they seem to create greater accountability to ensure that low-income households/communities are actually being served. However, it is notable that nowhere in the regulations does it state that documentation is required whereby the applicant for a SMART subsidy must specifically identify by name the low-income housing property to be served. Under SMART 2.0 it seemed like these could be claimed by the applicant and only after receiving a subsidy was the low-income recipient identified (although what DOER follow-up was in place was not clear). The new language implies that actual locations need to be identified, which is important before receiving a subsidy, but I would suggest strengthening the language by requiring low-income properties or communities to be named.

Enable Access to Application Materials by Municipalities

While a SMART subsidy will not be granted until all necessary municipal permits are approved (thankfully the SMART 2.0 public entity loophole is removed), local permitting authorities would still benefit from reviewing the project's application materials. The information provided in a project's SMART application can help with local monitoring and general due diligence for the host municipality. I would suggest that Planning Boards, Zoning Boards of Appeal, Conservation Commissions, Boards of Health and Select Boards/Councils or municipal executives be allowed to have ready access to SMART application documentation for their use in monitoring or similar due diligence regarding projects in their municipality. These materials should be readily available; they should not require a public records request but a simple administrative inquiry.

THINGS TO LIKE

Establishment of Mitigation Fee (categories and requirement to pay 100% first) (28.09:2)

The Mitigation Fee framework is a huge improvement in SMART 3.0. This model introduces financial disincentives that hopefully better protect Carbon Storage, Ecological Integrity, Agricultural Potential (crop yields), Cumulative Impacts and Critical Natural Landscapes (see comment earlier regarding BioMap). This is much better than the SMART 2.0 Subtractor approach which allowed for loopholes and continued bad siting. It is particularly noteworthy that the fee is scalable – based on the acreage of the project.

While the structure is correct, a necessary factor in the fee's effectiveness is that the financial penalty must be high enough to actually be a disincentive to discourage poor siting. Simply put, the fee must be high enough to change a potential applicant's calculation of benefit and their the applicant's behavior. I would suggest that DOER err on a higher per acre fee for Year 1 so that bad projects are not inadvertently granted a subsidy due to the fee simply a "speed bump" as part of the cost of doing business; it must be a deterrent. Starting with higher rates to test the effect is a more prudent approach because rates can be reduced in Year 2 if needed but poorly sited projects that are granted a subsidy and proceed due to insufficient Mitigation Fee cannot be undone.

I also want to comment DOER for requiring that the payment for the Mitigation Fees must be made in full prior to a project receiving its final approval for SMART subsidy. This forces the fee to be taken seriously rather than allowing applicants to simply incorporate the fee into their operating costs which would make the fee less meaningful as a disincentive.

Use of Overlapping Land Approach (28.08:1 &2/ 28.09.2-A3)

It is praiseworthy that DOER has introduced the approach of protecting land using the concept of a project overlapping with protected land is either ineligible or triggers a mitigation fee. This shifts the previous focus from how much of the designated land is being built upon (a percentage) to establishing more clearly that protected land should not be encroached upon. This shift in focus is greatly appreciated since it applies a more forceful protective measurement and clearly delineates protected land.

Explicit Protection of Carbon Storage and Sequestration Protection (28.09.2-A1)

SMART 3.0 makes it clear that carbon storage and sequestration is important; SMART 2.0 didn't even use the word carbon. By making land with the top 20% of carbon storage in the state ineligible should hopefully protect carbon storage and sequestration regardless of the designation of the land (ie BioMap or not). For the Commonwealth to do its part in mitigation is important to protect and thereby ineligible for a subsidy. Not only is this objectively and substantively important but it also establishes an important framework for protecting storage/sequestration capacity. One note having reviewed the Resilient Land Mapping Tool that DOER suggested to use as its data source; what parcels fall into the top 20% must be made readily available and clearly understood by applicants and the public alike; currently I do not find this clear.

Inclusion of Wetlands Buffer Areas for Protection

Under SMART 2.0 wetlands buffer areas were not considered ineligible. The inclusion of buffer areas in SMART 3.0 is a significant improvement.

Affirmation of Certain Location-Based Adders (except Floating and Dual Use) (28.07.5B)

The Compensation Rate Adders for preferred Locations is generally good (with the two exceptions noted above – Floating solar and Dual Use solar). I support Compensation Adders for solar deployment in Brownfields, Landfills, Building and Large Building Mounted, and Canopies.

Closing of Loopholes for Public Entity Status (28.07:5 C-4)

The improvement with "Public Entity" status is significant and I believe the SMART 3.0 regulations will close the previous loophole that allowed subsidies to be granted for privately owned projects to be "operated" by municipalities through questionable contractual arrangements. This was especially egregious because under SMART 2.0 public entity projects could apply for a subsidy prior to getting necessary permits. While this is not a highly visible issue, I greatly welcome it since municipalities and government entities must and want to be part of climate solutions. Removing the loophole can support municipal solar adoption and fix the unintended consequence of the previous language. The tightening of the requirements in SMART 3.0 so that 100% of the energy from a subsidized project go to a municipal or government entity or that a municipality or government body owns the installation is a welcome change. This makes the public entity concept authentic.

Addition of Dual Use Requirements (28.07:5 -A3)

While I believe dual use projects should be limited to agricultural land that is Not Prime Farmland or is Fallow Land, the additional requirements in SMART 3.0 for dual use projects are helpful to make these projects less damaging to agricultural capacity. This is especially important given the experimental nature of agricultural solar deployment.

For Newly Created Farmland, it is good that clear cutting is prohibited. Similarly, for Newly Created Farmland, it is equally important that soil testing for the ability of future crop growing is required since the most important factor for agricultural land is the ability to grow crops.

I also support the effort prevent or minimize crop growing land being converted to grazing or hay production by requiring an agricultural plan that demonstrates concurrent growing of comparable crops. While I question if a reduction of up to 50% of sunlight being allowed is too much, the requirement for a

sunlight reduction plan is crucial to force documentation of the planning and impacts of solar over active growing land.

Finally, as noted elsewhere, the annual reporting requirement to monitor agricultural yields is hugely important and I would suggest that DOER use this data to monitor the effectiveness or detrimental impacts of dual use. As previously noted, I would suggest that dual use installations should not get a Compensation Adder for at least a few years until the yield data can be adequately evaluated to see if dual-use is actually a preferred method of solar deployment.

Protection Against PFAS for Floating solar (28.07:5-B4)

While I continue to think that Floating Solar is limited in valuable and siting can be questionable, and depending on further clarification by DOER, these might not be eligible in the future, I appreciate that there is a new requirement to certify that the equipment does not contain PFAS. Given the increasingly pervasive instances of PFAS contamination, DOER should not be allowing new sources of PFAS to enter the environment.

Affirming Interconnection Agreement Requirement Prior to Final Subsidy (28.06:1-C1)

The requirement for a solar project to submit an executed Interconnection Service Agreement with the utility in order to receive its final approval for a SMART subsidy (Statement of Qualification), is essential.

Requirement That All Permits Are Approved Prior to Subsidy (28.06:1-C2)

It is an improvement that there are no longer any loopholes (as existed with Public Entities under SMART 2.0) and that all necessary governmental permits and approvals must be in place before a subsidy is granted to a project.

Closing of Loophole for Low-income Off-takers (28.07:5-C2)

I support the tightened language regarding projects that have “Off-Take Adders” In addition to the previously noted improvement regarding Public Entity projects, the language seems better in regards to Low-Income projects. In particular the requirement that low-income communities are better defined and better documentation is required. In particular, the fact that applicants must provide satisfactory documentation to DOER that the installation is either sited on a Low-Income Property or 100% of the generation output will be delivered to one or more Low Income Properties in the form of electricity or Bill Credits is important.