
Comment on Site Suitability Assessment for Clean Energy

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To EnergyPermitting (EEA) <EnergyPermitting@mass.gov>

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dear EEA,

as a concerned landowner and farmer, I have been following the evolving regulations for ground mounted industrial solar. I have attempted to understand the complex scoring system you are developing for site suitability.

I did a model run on the ARC GIS platform, that is linked to here:

<https://experience.arcgis.com/experience/6d23894371a74a6f920bb30a606c16fd/>

drawing polygons over the Northampton Meadows, 1000 acres of prime farmland which is also mapped as BioMap core habitat. I tried polygons of various sizes including over my own property. I can attest that the mapping tool did seem to capture those values, returning 5.0 scores for both biodiversity and agricultural resources, with a few diminutions over small areas of clay soils that appear in places in this landscape.

However I noted a low score of 1.0 for carbon storage potential, which I disagree with, for the following reason. On my own land, I have been able to almost double the soil organic matter percentage, from under two percent to over 3 percent, in a matter of eight years. In other words, I added over 20,000 lbs per acre of carbon to the soil. Agricultural soils are typically depleted in organic matter due to farming practices, but those practices can be modified to reverse the trend. Therefore these areas represent an important opportunity for carbon storage. It should be noted that higher soil carbon also improves crop production and water holding capacity. Please alter your methodology to reflect this.

I also would like to comment that the mapping tool did not identify the fact that the Northampton Meadows is entirely within the 100 year floodplain. This fact makes the Meadows a very risky place for any sort of development, and hopefully would be flagged at a very early stage of project consideration.

I would also like to express my concern that the draft solar regulations appear to allow developers to offset the unfavorable site suitability numbers through mitigation, including off-site mitigation. But this is a very slippery slope, as I will demonstrate in the case of the Northampton Meadows.

No one will be able to replace the resource of 27 feet of topsoil deposited by glacial Lake Hitchcock, which is among the world's best agricultural soils. especially in Massachusetts where there is so little

soil of this quality. What that soil translates to is the highest possible yields of virtually any crop grown here. The dollar value of that crop goes as high as \$30,000 per acre per year, a number I achieved with strawberries. Imagine a 20 acre array on this soil, that would be a loss of up to \$600,000 of food production per year, times 20 years would be \$12 million.

So any mitigation would have to replace \$12 million of food production to offset the loss of these 20 acres.

I note that the mitigation being proposed in the energy siting regulations is vague, as far as I have been able to understand it. It does not specify what portion of the loss of resources must be offset, or whether the mitigation would replace the actual lost resource in kind (in this case Hadley loam soils and food).

I believe you should require a developer to replace the lost resource in kind and in a nearby location. Nor should there be a tradeoff that if one acre of prime farm soil is lost, another should be preserved in perpetuity, since that is effectively losing 50% of the resource.

Finally, I am worried that the rollout of this new paradigm is going to reveal some unexpected flaws very quickly, but the agency is proposing to not issue any revisions till 2028. I think this needs to be kept open for immediate corrections before too many mistakes are made.

Thank you for considering my comments,

Fred Beddall
full time farmer for 28 years