

Written Testimony in Support of S.2596

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This testimony is in two parts. Part I is oral testimony presented at the TUE public hearing on 11 January 2022. Part II is a column that covers some of the same material in somewhat greater detail that was published with slight variations in The Greenfield Recorder, The Montague Recorder, and the Amherst Bulletin in 2021.

Part I: Oral Testimony Before the Joint Committee on Telecommunications, Utilities, and Energy on January 11, 2022

Good afternoon and thank you for this opportunity to speak in support of S.2596. My name Bill Stubblefield and I live in Wendell. My background is in evolutionary biology with a Ph.D. from Harvard University. I am a member of a subcommittee drafting new bylaws regarding solar energy installations, but I speak today on my own behalf.

Massachusetts is committed by law to achieve “net zero” greenhouse gas emissions by 2050, and if we are to reach this ambitious goal we must both greatly reduce emissions and remove vast quantities of CO₂ from the atmosphere. The only available means for achieving this second imperative is to enhance accumulation of carbon in natural ecosystems, especially forests and wetlands. This requires that we keep forests as forests and minimize the harm we inflict on them.

The existing language in Chapter 40A, Section 3 prohibits towns from “unreasonably” regulating solar installations without regard for their size or ecological impact. This ambiguous language together with state subsidies, low prices for forested land, and the profits to be gained from logging have all resulted in a rush to replace forests with industrial-scale solar arrays. This

ongoing assault on forests seriously erodes our ability to mitigate climate change and preserve ecological integrity.

Solar developers portray towns like mine as driven by selfish NIMBYism, but let us be very clear where the real selfishness lies. It is not towns attempting to protect local resources that is harming climate mitigation but rather powerful and well-connected profiteers seeking to exploit our planetary emergency. There is plenty of sunlight for all of us if we site solar energy installations where they best serve the welfare of all people and not just a few profiteers.

Please stand up for our towns and their rich local knowledge by supporting their efforts to ensure a livable future for themselves and all members of the Commonwealth. Let us embrace a grander vision of the Emerald Necklace appropriate for our century where the sparkling jewels on the necklace become larger and more connected as we move outward from our urban centers.

Please vote S.2596 out of committee with a favorable report and support its passage in the wider legislature. Thank you very much.

Part II: Solar Energy? Yes! Deforestation? No!

The latest climate report from the IPCC released in 2021 raised the alarm over the accelerating climate emergency to the highest level yet.

A global average temperature rise of more than a plenty dangerous 1.5°C is already locked in, whatever we do. Under all scenarios, we likely cross this limit within the next decade or two. The only reasonable hope for a livable future is to act now to eliminate emissions of CO₂ from burning fossil fuels and to remove vast quantities from the atmosphere. If we do both of these things, stop making things worse and start making them better, it is still possible to pull global temperature back to a relatively safe level after exceeding 1.5°C for a brief period.

Very large, immediate, and sustained reductions in greenhouse gas emissions are essential. This requires a rapid switch from fossil fuels to renewable energy, including a dramatic build-out of solar power. At the same time, we must also protect our forests and other natural sinks to the fullest extent we can, as these are the only means we now have to capture and store CO₂ at any significant scale. The IPCC reports that natural sinks alone are not sufficient to stabilize the climate and that new technology will also be needed. What is clear is that failure to protect natural sinks will guarantee a more dangerous future.

Forests are also needed to address another global crisis we now face, the loss of biodiversity at rates that far exceed those of the recent geological past. Forests are the coral reefs of the land in terms of the remarkable living diversity they support. Protecting them from further degradation is of critical importance for a fully functioning biosphere and our own survival.

Astonishing amounts of energy reach the earth from the sun on a daily basis. It is estimated that covering a mere 0.3% of the land surface with solar arrays using existing technology could supply all the energy that humans now use. Given its location and variable weather, Massachusetts would need several times that much in order to be self-sufficient but still only a small fraction of total land area.

We don't have to give up forested land that sequesters carbon nor the agricultural land that sustains us. The great bulk of our needs can be met using parking lots, south-facing roofs and walls, as well as land already degraded by landfills or industrial pollution. In fact, more than enough land is already occupied by the fossil fuel industry.

Some argue that replacing forests with solar arrays is a net positive for the climate because solar arrays decrease CO₂ emissions through the reduced use of fossil fuels by an amount that is larger than the amount that would have been removed from the atmosphere if the forest had been allowed to continue growing. But this is a misleading way to frame the problem. For one thing, this advantage evaporates unless each additional increment of solar power is matched by an actual reduction in fossil fuel use. Merely growing the supply

does nothing to reduce emissions. Also, and more importantly, emission reduction and CO₂ removal are both needed, so it is simply wrong to argue that one can be substituted for the other any more than you can extend your life by sacrificing your liver to save your heart.

A growing threat to forests in our region is the complete removal of forest cover to install ground-mounted solar arrays on an industrial scale. This unnecessary destruction is promoted by direct government subsidies that often end up in distant corporate coffers. It would be far better to use our limited tax dollars to help our local communities become more resilient and better able to take care of themselves by assisting local individuals, businesses, and cooperatives to weather the tough times that lie ahead because of our inexcusably feeble response to the climate emergency.

Deforestation for whatever reason results in the loss of forest benefits. Given the planetary emergencies that now confront us, climate mitigation and biodiversity protection are of critical importance, but forests provide many other benefits as well.

Some may favor the mental well-being and spiritual replenishment that forests provide, others the joys of experiencing nature through outdoor recreation, and still others the economic value of ongoing supplies of wood products, but whatever forest benefits matter most to you, they are all eroded by forest loss. Please join me in supporting a moratorium on large-scale solar installations at <https://www.savemassforests.com/action-large-scale-solar/>

Bill Stubblefield is a trained biologist, forest-protection activist, and nature lover residing in Wendell.