March 1, 2022

Testimony - Maine LD 856

Members of the Maine Legislative Committee on Agriculture, Conservation and Forestry:

I am writing to describe my support for the amended LD 856 – *An Act to Balance Renewable Energy Development with Natural and Working Lands Conservation.*

I have worked in United States agriculture since 1990, and I have farmed part time in southern Maine since 1998. This includes crop, animal and fiber production, small scale forestry and equine-assisted therapies. I also spent over 10 years working off my farm in the U.S. sheep, wool, and textile industry. During this time, I have witnessed mounting pressures on farmers, and experienced the growing tension between the "highest value" uses of open land for production or housing. As the saying goes: "they aren't making more land."

I became involved with the Maine Agricultural Solar Siting Stakeholder Group after conversations with Maine Farmland Trust and the Department of Agriculture, Conservation and Forestry which I initiated based on concerns over the siting of ground-mount solar facilities on farmland. I feel strongly that farmland soils are stewarded mindfully for the capacity to feed and clothe us, and I am hopeful for the potential of healthy soils to help solve the global climate crisis. Additional losses of farmland to solar development *should be* of concern, yet there are additional considerations.

In researching the intersection of solar energy and agriculture I learned about the emerging field of "agrivoltaics" - farming integrated with renewable energy on the same acreage, a dual-use. This concept is similar to other agricultural techniques organized around symbiotic plant and animal relationships, the stacking of crops and enterprises. Outside of research projects, utility scale agrivoltaics are uncommon in the U.S. but smaller 4-8 megawatt projects like the 10-acre Rockport, ME solar facility co-located with blue berry production, and the 24-acre Jack's Solar Garden (www.jackssolargarden.com) in Longmont, Colorado, are providing insights into scaling regional agrivoltaics projects.

An example of existing dual-use farming and solar already at scale in the U.S. is livestock grazing in solar sites as a strategy for managing vegetation and soil health. Sheep are most often employed due to their stature, disposition, and the fact that little modifications are required of solar infrastructure to accommodate them. It is estimated by the American Solar Grazing Association (www.solargrazing.org) that between 12-15,000 acres of ground-mount solar sites in 41 states were grazed in 2021.

The largest of these sites, the Topaz Solar Farm, is a 550 megawatt photovoltaic power station located in San Luis Obispo County, California completed in 2014. It is over 9 million solar panels across 3,350 acres of land in which more than 5,000 sheep are employed to manage vegetation, fuel load, and habitat. According to biological consultants, Althouse and Meade, the Topaz solar site has shown 25% greater forage production under the solar panels, and a greater increase in biological diversity *within* the solar array than outside of it. In addition to ecosystem services, lamb and wool are agricultural commodities produced at the site.

Maine is a new-comer to the challenge of solar development pressure on agricultural land, but this may be to our advantage – we can learn from our neighbors, and we can draw from ongoing research. There are existing solar sites constructed on viable farmland in the state that may accommodate dual-uses like managed sheep grazing, and farmers with the interest and experience to implement dual-use projects. LD 856 may help to implement recommendations from the Solar Siting Stakeholder group for the development of dual-use projects, and a pilot project reserving at least 20 MW for dual-use production in Maine to better define standards for the state.

Solar and farming can co-exist – it does not have to be an either/or proposition, but to do so will require intention. LD 856 can help.

Respectfully submitted,

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