AGRICULTURE SOLAR STAKEHOLDER GROUP – PUBLIC COMMENTS

1. Danielle Jacques

On the topic of defining farmers, landowners, leased farmland in an attempt to capture the nuance around who owns and controls land in Maine, I just want to point out that when we talk about "farmers" we are almost always talking about men. I'm a fifth-generation daughter in a family farm that was handed down from eldest son to eldest son and then sold into solar development. My female family members were not included in negotiating the sale, and did not benefit financially from it, and they're the ones who are now dealing with the consequences of the land in their community being converted to solar. As aging farmers in Maine retire (or in the case of my family, when they die unexpectedly), and women continue to be left out of business decisions, I think support for farmland succession planning ought to be seriously considered in any discussion around preserving agricultural land that is rapidly being lost. This may not seem like a problem for this group, and this is a topic that no one wants to touch because it is personal and often painful, but this is an issue that we need to get out ahead of before large swathes of farmland (much of which is likely not in use) is sold off to developers rather than transitioning to the next generation of farmers.

Thanks for all your work on this and for taking comments. I plan to send in more feedback on the report before next week. Hoping that other people can learn from the problems my family is already facing around solar development encroaching on prime agricultural land.

2. Ryan Dennett CrescentRunFarm

My main concern with the report are the definitions of dual use and co-location. It doesn't make sense to me that grazing sheep under solar panels would not be considered dual use but rather vegetative management. I'm not sure I understand why this distinction is made, but I can assure you that grazing sheep under solar panels is not merely vegetation management, and it's still farming, even if I don't own the land or did not have previous access to it. I sell several agricultural products (meat, fiber, sheepskins) as a direct result of my solar grazing. I would not be able to raise these agricultural products at any scale and have continued growth without the land access and incentives created by dual use agricultural opportunities. While I am making this comment as a farmer, I am also a service provider assisting retiring and beginning farmers, and from that perspective would advocate that land access is a huge threat to our local food system. I think this report needs to do more to support the opportunities that solar creates by providing a broader definition of dual use agriculture and provide more incentives for co-location as well.

I heard at the last meeting that there was interest in hearing more from dual use farmers, or a desire to have included them more in the process. My husband and I are the only contracted dual use graziers in Maine and operated on 4 installations for 2 solar companies this year and have 15 sites available to us in 2022.

3. Paul Cunningham

I am a member/owner of the first solar farm in Maine. Our array is placed on an old barn, not in a field where it doesn't belong.

What is promising about the draft report? One promising aspect of the draft is the dual-use requirements, although I do not trust that they will always be met or enforced. I also like requiring "provisions for decommissioning the project"; decommissioning design should be included in ALL ground-based solar farms.

What is missing? I see no reference to Maine's current lack of food self-sufficiency or agricultural sustainability. The lack of solar on rooftops and parking lots is missing. There is also no way to gauge the level of influence that exists over public policy by the solar industry itself.

What concerns me? In our zeal to create carbon-free electricity (which I agree is needed), the draft ignores the inevitability that Maine farms will be needed to feed Maine, and that protecting farmland is therefore of highest importance.

I don't think placing solar arrays on farmland or open space is a sound idea at all, except perhaps in the dual-use context. Certainly, no trees should ever be cut for solar farms (as I believe they already are), since forest conservation and reforestation (not tree farms) are important aspects to mitigating climate disaster. Additionally, solar farms in "natural" settings should not be considered until all viable roofs in the state are covered with PV panels, and until every viable parking lot has a solar roof. Why every state and municipal building with a viable roof does not already have PV panels, and why parking lots lack PV panel roofs are questions I have been asking for a decade.

Solar panels will not feed us. The long distance, big-picture plan to mitigate and adapt to climate disruption requires each state/region restructure to feed itself. The days of importing food from all over the nation (and the world) are coming to a necessary close. Likewise, the era of exporting food out of Maine is closing. Common sense tells us, then, that farmland cannot be dedicated to solar arrays: that is simply going the wrong way. Situating solar farms on farmland for profit will ensure a shortage of arable land just when we need it to feed ourselves.

I hope there is enough time to place solar projects where they fit in the context of broader, long-term sustainability.

4. Laura Casserly

My name is Laura Casserly and I would like to submit a comment regarding the solar stakeholder group report. I have not had enough time (a week is hardly enough time to give the public, farmers are busy people) to study the report or write my reaction but I wanted to at least submit something because I am surprised and disappointed by the overall tone/direction of the report.

- As long as there is a good decommission plan, we shouldn't fight or restrict (or deincentivise with tax policies) solar at all. I'm shocked this group of ecosystem minded people would spend so much time writing up such restrictions. Maine's best soils, even well-managed with carbon farming practices, can't sequester as much carbon as a solar farm's energy replaces. As a planet, we are in emergency crisis mode and need all volts on deck. I support encouraging dual use agrovoltaics. With a decommission plan, the prime soils will not be hurt but rather saved by solar.

- I also speak as a fledgling farmer who bought land from a land conservation organization. The land was advertised in writing that the landowner would reserve commercial solar rights and we had a few weeks to decide to apply for it. However, after we'd bought the land, it took thousands of dollars of lawyer work for us to pry out of the organization that their policies, as well as USDA/ALE's policies, are so restrictive they make any commercial solar project impossible for this parcel and all Maine farmers. We would not have bought this land if we knew commercial solar was prohibited as our first priority is to have a sustainable business that sequesters as much carbon as possible. In our case, we wanted to put the solar on a hayfield with poor soil and the water table at the surface, though it is not profitably arable land, it was designated "farmland of local importance" by the easement somehow. My personal situation is private but I write of it because I fear we were not alone in being misled about our ability to have commercial solar on the farm. Please keep in mind these policies will affect and hurt the ability of other farmers who bought land planning for the possibility to exercise their right to commercial solar (because it was written as a right of the landowner in part of the Conservation Easement they signed). In addition to the catastrophic environmental impacts of delaying any solar development, this will long term make it impossible for some Maine farmers without off farm income to keep their businesses.

Since my solar situation is settled/impossible, I have no incentive in this or money in this game but feel passionately other farmers should have the ability to sequester as much carbon as possible, including through renewable energy farming with decommision plans. Please consider my input.

5. Richard Lee & Kate Delvecchio Tender Soles Farm

My name is Rich Lee of Tender Soles Farm in Richmond. We are a horse powered vegetable and flower farm. We choose horse power because it is solar powered by its very nature.

I feel that the overall recommendations and guidance in the draft report are good. I think it should go further in emphasizing the importance of not developing agricultural land into solar fields just for the sake of electricity production. Nexamp is developing a solar field on what used to be a ledge and shallow soil site used as a disc golf course. I tentatively signed up with their community solar program for this reason.

I'm not sure how to contextualize climate change in this further than it is considering the goal of solar is to reduce fossil fuels, but I feel what may be getting lost in the push for solar is several things:

1. Eating locally is one of the most meaningful and accessible ways to reduce individual carbon footprints by removing a lot of the emissions produced by transporting millions of tons of food thousands of miles.

2. Well managed soils and forests can help absorb the increasing carbon emissions we are producing as well as acting as important buffers for increasingly common extreme rain events like we had when we got 4" of rain over a 36-hour period this July; a true anomaly.

3. We have tons of retail big box stores that have huge heat absorbing surfaces which require heavy energy use to maintain a comfortable shopping environment amongst a sea of parking lots. These sites should be prioritized before we begin targeting large fields that provide multiple ecosystem and human centered services solely because of easy access to the electrical grid and faster installation. We could also be further incentivizing and promoting rooftop solar as a decentralized method of reducing fossil fuel-based electricity production. Roofs are otherwise unproductive spaces; if we are serious about dual-use, this is where we should be looking.

Thank you for doing this important work towards creating a more sustainable future.

6. Michael Dennett

It seems ridiculous that the committee did not take the time to hear from actual dual use, co-location practitioners that are working in the field regionally, or within the state of Maine.

I believe that it's absurd that grazing sheep is determined to be “co-location" vs dual use. This needs to be changed. We should welcome sheep grazing with open arms. We should be working as a community to cultivate and establish this agricultural enterprise, rather than placing barriers to make it difficult. I worry that in certain scenarios, locations, or soil types dual use could be required in the future, and thus limiting opportunities for grazing. Additionally, there is no economic structure to support increased building costs for dual use (as described) at this time.

We have a golden moment here, and the tone of this report is out fear of the unknown, rather than excitement for the future. We need to change our perspective and perception and usher in a new way of food production whilst also producing energy. Any document short of supporting this mission will be a failure.

It's also important to remember that many of the landowners who installed arrays are farmers. I feel that private land owner rights allow farmers to produce income as they see fit including hosting a solar array.

7. Stacy Brenner

With both my farmer and state senator hat on, I wanted to chime in about the report.

I see one area that was addressed only once in the report via comments by MMA: PFAS contaminated farmland.

I would like to see farmland that is too contaminated with PFAS and too expensive for substantial and effective mediation that is adjacent to the places within the grid that allow for easy connectivity to be prioritized.

We allocated significant financial resources for the DEP to test the farms where we know sludge was applied and expect to have more acreage identified as unsafe for food production in the coming years as this testing takes place. Please consider amending the recommendations to prioritize these lands first.

8. David Asmussen

Thank you for working on this issue. I own and operate a commercial vegetable farm in Maine and currently offset our power use with rooftop mounted solar. I am an advocate for solar power, but I believe that panels should be on every rooftop and parking lot and brownfield before we cover farmland. It is obviously cheaper to use a big empty field, but I worry that we will all be sacrificing long term sustainability and resiliency for quick profits. Even "dual use" systems will lock a field into a certain method of farming for decades which may become nonviable before the end of the lifespan of the panels. That being said, I understand many fields are going to get used for solar anyway, so I will add my comments in hopes that siting of new developments can fully consider all the factors.

After reading the draft report:

I want to see a chart showing how many acres are needed to meet the solar energy goals at X spacing, with Y panel efficiency. Show on a map how big that area is. Show pictures of existing projects in other states.

Give a realistic estimate given current farming businesses on how much grazing will really be done with a "dual use" array in a field. I am aware that most solar installations are too low for grazing much more than sheep. Please show how many sheep farms might install a solar array. Please show how many cow / cattle farms might take advantage of solar installation if the panels were higher or mounted on single poles.

Please give panel density and possible megawatts per acre at a given panel efficiency when panels are spaced wide enough for haying operations.

Please give a few example hypothetical farms that go through the process of taking land out of current ag use to show the tax implications, possible income to farmer, loss of income from crops.

The chart on pg. 20 is absurd. If there is no "discourage" for anything, then it is just a handy tool for solar developers to get what they want, and the rest of us can't/won't take it seriously. Please, discourage solar development on actively farmed prime soil, that is the bare minimum of anything that the committee can do. Discouraging development on any prime soil would be preferable.

Want a carbon accounting for siting solar farm on woodlots. How much carbon is released, not captured by trees, saved by panels, released from production of panels from changing the use from woodlot to solar.

I appreciate the input from the MMA and agree with most of what they recommend.

An impact report if X acres of hay were taken out of production from solar development. If overall supply is lower, then hay supplies will be less resilient given extreme weather seasons.

Investigate if the USDA NRCS can have a role in incentivizing solar installations that allow a greater degree of dual use. (high, spread out, pole mounted systems). The solar companies are not going to spend a cent more than they need to, we need to make up the difference to get better installations which don't sacrifice our agricultural future.

9. Abby Sadauckas

I write with appreciation for the work that you and the solar stakeholder group has been doing to create policy recommendations around solar siting in Maine. I had some feedback to provide as both a farmer and as the Maine Field Agent for Land For Good.

A couple of things weren't clear to me as a reader. In the case of developments <20 acres is there any permitting process required by the state (other than stormwater management law)? This document reads as though the primary focus is developments over 20 acres. If that is the case, it seems prudent to support municipalities as proposed by the Maine Municipal Association (MMA) to ensure that guidance is equally applied across the state at the local level to projects of less than 20 acres.

Second, how will the State determine if a solar development enhances the viability of a farm? In many cases (see comments below) farmland is not owned by the farmer using it.

As a farmer, I'm most concerned that this document implies the farming community is settled on the idea that solar development and food production can exist on the same limited acreage. I'd love for the report to echo the sentiments expressed by MMA that all other land be explored for solar development first. Below are some additional thoughts from my points of view as a farmer and an ag service provider that works with farmers to access farmland.

Access to farmland is a top barrier to the start-up and long-term economic viability of new farm businesses, and by extension the health and resiliency of the Maine farm economy and its rural communities. The operation I run alongside my fiancé and his family is Apple Creek Farm. Our farm leases more than 70 acres of hay land in Bowdoinham. The majority of this leased land is owned by non-farming landowners who are at or past the age of retirement. In most cases, it is unclear whether the land, which is a significant asset, will stay in agriculture after their period of ownership.

Keeping land in farming is especially important to create and hold open future opportunities for the next generation of farmers to access land. In my first decade of farming, I've already seen agricultural acreage lost to housing development in our town. Solar development represents another potential threat that may continue to make it challenging for new farmers like us to find affordable, accessible land to support our goal of feeding our community. In most cases our farm could not afford to purchase the land we lease, and we are certainly not able to compete with the market rate of lease payments that solar developers are promising land owners. Our farm leases are secured by our relationships with landowners, their trust in our stewardship and their desire to keep land working. Part of the benefit for these landowners is that our farming activities maintain their eligibility for current use taxation. In many cases it would be difficult to create a "dual-use" that would permit us to continue to make hay from this leased land. Instead, additional costs would be incurred to transition our use from making hay to grazing livestock. These might include a well to provide water and would not improve our farm's viability because we would still need to purchase hay from elsewhere.

Given the significant amount of land and farm assets that will transfer in ME out of the hands of older farmers - many of whom lack identified successors - prioritizing development that keeps land in active agricultural production is essential. While many landowners are seeking an additional way to combat climate change, many are prioritizing energy production over food production. I would urge the solar siting working group to find the right balance between supporting energy development while ensuring that solar development support farm viability rather than displacing farmers and food production. This means considering how a proposed development criteria ensures that our best agricultural land is not developed as well as looking holistically at farmland use in the state to ensure we're not undercutting goals of feeding New England in order to meet the state's energy goals.

10. Jeff Bragg

I would like to convey my personal dislike for the current process for leasing land for solar farms.

In the early days it was even a temptation to try to get some of our own land in the equation. It wasn't too long before we realized this land rush was now our greatest threat to our own land base. At one point in the last year we had almost 1/10 of our total land base in the queue for solar panels. Very scary.

I am not generally in favor of government intervention but unfortunately it was government action and dollars that is driving this.

11. Corinne Michaud-LeBlanc - LUPC

I have been following the Agricultural Solar Stakeholder Group process on behalf of the Land Use Planning Commission and would like to offer one comment on the draft report. Regarding Recommendation 1: Creation of a centralized clearinghouse of information (page 22), the group may want to consider including LUPC permitting data as a resource where appropriate.

12. Kelsey Herrington

I am a full-time farmer in Scarborough ME and I am concerned that solar development on farmland is going to disproportionately benefit landowners and solar developers while sacrificing long-term food security for our region. We cannot make any more farmland without extensive deforestation, and what farm land we do have is already under high development pressure from other industries. I have farmed on leased land for a decade because there are few large tracts of good farmland available in my area, and when land does transition ownership it is quickly sold for non-agricultural development. I am not writing out of concern for the economic interests of farmers. I am writing out of concern for social equity and food security. We need farmland to grow food, and we need large uninterrupted tracts of good farmland to make food production efficient enough to feed our society. Solar development on farmland will severely limit what can be grown on that land under and around the panels, further divide up already small tracts of farmland, and take farmland close to populations centers out of efficient production. We need to put the long term (multi-generational) need to feed working people above the short term profit motive of the solar industry and landowners.

13. Dominic Pascarelli

I am a full-time farmer in Scarborough ME and I am concerned that solar development on farmland will disproportionately benefit landowners and solar developers while sacrificing long-term food security for Maine and our region. We cannot create more farmland without extensive deforestation, and what farm land we do have is already under high development pressure from other industries. I have farmed on leased land for a decade because there are few tracts of good farmland that are large enough and for sale in my area (when farmland does transition ownership in our area, it is quickly sold for non-agricultural development).

I am not writing out of concern for the economic interests of farmers. I am writing out of concern for food security and social equity. We need farmland to grow food, and we need large uninterrupted tracts of good farmland to make food production efficient enough to feed the hard-working people of Maine and our region. Solar development on farmland risks severely limiting what can be grown on that land under/around the panels, further divides up already too-small segmented tracts of farm land, and takes farmland close to populations centers out of efficient production. We need to put the long term (multi-generational) need of feeding hard working people in Maine and our region above the short-term profit motive of solar companies and landowners.

14. Sara Hodges Sparkplug Farm

My Name is Sara Hodges and I own Sparkplug Farm in Leeds with my partner John Wright. We moved to Leeds five years ago in part because it was still an active farming community, the land was affordable and there were still fields we could lease close by. We currently lease an additional fifty acres of grazing land and buy our hay from farmers in Leeds.

In the past year we have seen 170 acres of open farmland that is zoned prime agricultural land be approved for solar development in our town. I cannot express how frustrating this feels as a young farmer trying to build out a business. I cannot afford to compete with the leases these solar companies are presenting to land owners.

I support solar, we live in an off grid solar powered house, but I think it is short sighted to allow these companies to put solar in open agricultural fields. It is disheartening to see the amount of subsidies that these companies are currently receiving while small farms are allowed to flounder and go out of business. Towns need guidance and regulations that they can follow when it comes to solar developments and how to protect the open farmland in their towns. While these developers say they are going to clean up their projects when they are done producing power, the clean-up budgets they present do not seem adequate for returning these fields to agricultural use. Additionally, these companies are not subject to having to work with farmers. They can market their projects as possibly dual purpose and then change their minds after they install.

I would urge you to not allow solar developments to be put on open agricultural land. I would propose that if the state is going to subsidize solar it does so for projects that are truly dual purpose such as rooftops, parking lots, box stores, houses etc. and not limit farmers' abilities to grow food for their communities.

From talking to other farmers, it seems that if they are pushed out of leased land by solar development, they will be left with the choice of clear cutting forested land and creating new fields. This seems to defeat the purpose of renewable energy in the first place.

Maine is already a challenging state to farm in, we don't need to make it any harder.

15. Annie Watson Maine Organic Milk Producers

On behalf of Maine’s organic dairy farmers, I’m writing to express concern about the lack of meaningful regulatory proposals in the draft report.

Landowners with property close to power substations have experienced an explosion of inquiries from solar developers seeking long-term leases for solar projects on their land. These developers offer large sums of money in lease payments, often around $1,000/acre/year. This has put intense pressure on Maine’s organic dairy farmers as they try to compete to farm the sometimes very limited open land near their farms. According to the 2017 USDA agricultural census, Maine farmers lease more than a quarter million acres of farmland in the state. The mantra of “farmers know what is best for their land” cannot apply to land they lease. In particular, Maine’s organic dairy farmers rely heavily on leased hay and pasture land, often paying $50/acre/year or less for their agreement. These farmers are at a significant financial disadvantage against solar developers.

Additionally, the boom in solar development presents a significant barrier to Maine’s young and beginning dairy farmers, who struggle to enter this capital-intensive industry and are now facing inflated land prices due to solar development. These beginning farmers often rely most heavily on leased land. The report does not contain any recommendations for meaningful regulations that would address these challenges, and instead relies on voluntary siting guidelines that will have limited impact in steering projects towards more appropriate locations.

An additional concern is that much weight is given to the development of dual use projects as a means to reduce the impact of solar development on productive agricultural lands. However, it is our understanding that, under current market conditions, such projects are not financially viable. Given that the report does not suggest the implementation of an adder system which would make such projects possible, it is unclear if any dual use development will actually occur on a meaningful scale. Such projects could be highly beneficial to organic dairy producers who can graze their cattle under the shade of panels. However, without the use of adders we instead expect that conventional solar arrays, which exclude all current uses by Maine's organic dairy sector, will continue to be the norm.

We understand the urgent need for renewable energy development to reduce our greenhouse gas emissions and slow climate change. Farmers are far too familiar and highly impacted by increasingly erratic weather. However, encouraging the loss of our best agricultural soils to any type of development puts Maine's farmers and the state's food security at risk. We recognize that the revenue from solar leases can offer struggling dairy farmers an economic lifeline, but many, if not more dairy producers are being negatively impacted by solar development as they lose access to critical farmland in their communities.

We urge the committee to add more restrictive language to its final draft that better balances the need for renewable energy development with the protection of Maine's limited agricultural land.

16. Kristen Puryear - MNAP

The Maine Department of Inland Fisheries and Wildlife (MDIFW) and the Department of Agriculture, Conservation and Forestry's Maine Natural Areas Program (DACF-MNAP) are sympathetic to the concerns of the agriculture community and support the stakeholder group's efforts to identify and communicate important agricultural resources that should be considered in solar project siting. However, both Departments are also concerned about the potential impacts of solar siting on rare and endangered fish, wildlife, plant, and natural community features as well as other natural resources. We offer the following comments and recommendations in hopes they will help facilitate the consideration and protection of resources of concern in renewable energy planning.

Maine Won't Wait Strategy E.1. identifies a goal to develop policies "…to ensure renewable energy project siting is streamlined and transparent while seeking to minimize impacts on natural and working lands and engaging key stakeholders". Yet in our review of the Draft Report of the Agricultural Solar Stakeholder Group, we note that there is no discussion of, nor recommendations given, regarding natural lands or working lands other than those in agriculture. Furthermore, there is no mention of thoughtful siting of solar projects to avoid impacts to important wildlife and fisheries habitats, rare plant populations, or rare or exemplary natural communities, many of which co-occur with agricultural soils and farm woodlots. We suggest that including these resource issues would positively add to the document. We recommend that the Final Report state the importance of natural resource considerations in solar project siting and design. MDIFW and MNAP are available to provide assistance on these topics and guidance documents are also available (see links below). We respectfully suggest the following to address concerns related to natural and working lands and to be more consistent with Maine Won't Wait Strategy E.1.

Executive Summary:
We suggest the following text addition for the Executive Summary, to recognize the broader suite of potential impacts and natural resource-related siting considerations:
Please note that this stakeholder initiative and document have focused on making policy recommendations to balance the need to protect Maine's current and future agricultural land with the need to develop sources of renewable solar energy. We recognize the potential to also impact significant acreage of important natural resources (e.g., rare and endangered plants, animals, and high value habitats) and encourage readers to contact the Maine Department of Inland Fisheries and Wildlife, Maine Natural Areas Program (Maine DACF), and other relevant agencies to identify and consider such resources in solar siting and design prior to the preparation of any project permit applications.

Section 8, page 20, Matrix of Agricultural Siting Considerations:
The Matrix on page 20 encourages solar co-location or solar development in woodlots on farms. Woodlots are presumably forested areas that could vary in size, current use (e.g., firewood, grazing, timber), and management history (e.g., early successional to mature). As forested areas, they may also contain significant or high value wildlife and plant habitats or wetlands and streams, and therefore may not be well suited to clearing and solar development. In addition, the Forest Carbon Task Force Final Report (Oct. 29, 2021) identified an overarching principle that is "foundational to the success of Maine's forests in sequestering more carbon". Specifically, "Maintaining existing forestland ("keeping forests as forests") is fundamentally important if forests are to make a growing contribution toward achieving the State's climate goals" (page 4). Even though the Matrix as written is intended as general guidance, the current language which encourages development or co-location of solar projects within woodlands could be perceived as counter to these Task Force goals. In the promotion of Maine Won't Wait Strategies, especially Actions that relate to a single Strategy (in this case E), it is important that recommendations and guidance not be at cross-purposes.

It is worth noting that several of the Forest Carbon Task Force's recommended actions include those that may be relevant to farmers that own and manage woodlots between 10-10,000 acres in size, such as forestland conservation, incentives for and promotion of the voluntary adoption of climate-friendly forest management practices, and potential changes to the Open Space Current Use Taxation program. We recommend removing language from the Matrix table that encourages development on woodland areas and also to include a second text box at the base of the Matrix table (similar to the Non-agricultural land text box), as such:

Natural Resources Nexus
Agricultural land including actively farmed, other farmland, inactive farmland and woodlots have the potential to support important natural resources critical to the State's biodiversity. Natural Resources include important wildlife and fisheries habitats, rare plant populations, and rare and exemplary natural communities. Contact MDIFW and MNAP to determine presence and seek siting guidance.

Definitions (page 20 line 2)
Natural Resources should be defined to include important wildlife and fisheries habitats, rare plant populations, and rare and exemplary natural communities. The definition should also include wetlands, ponds, and streams which are protected by the Maine Department of Environmental Protection (DEP) via the Natural Resources Protection Act and Shoreland Zoning. On page 5 of the draft report, natural resources are defined as prime farmland or soils of statewide importance. The revised definition would better align with the use of the term by the State's natural resources agencies.

For inclusion under Other Topics (page 17): Natural Resource Concerns
We suggest the following text addition under a new heading of Natural Resource Concerns, to recognize the broader suite of potential impacts and natural resource-related siting considerations:

As noted above, Maine Audubon's analysis of 180 solar projects submitted to DEP for review, which actually represents only a fraction of the total number of projects in various stages of design and development, reveals that "43% intersect high value plant and animal habitat and 49% intersect with large forest blocks." A preliminary review by MNAP suggests that 30% of MNAP's mapped locations of rare plants and natural communities, 54% of the MDIFW's mapped Endangered, Threatened, and Special Concern animal locations, 72% of MDIFW's mapped Deer Wintering Areas, and 41% of MDIFW's mapped Inland Waterfowl and Wading Bird Habitats potentially intersect with agricultural soils considered in this report (close to 300,000 acres statewide). Clearly, agriculture and natural resources interests overlap. The presence of, and means to avoid/minimize impacts to, important natural resources should also be considered in siting and design of solar energy projects. MDIFW and MNAP have gone to great efforts to identify such resources of concern, and we encourage readers to contact these agencies for assistance and to consult applicable guidance documents, such as MDIFW's Solar Energy Project General Resource Guidance and Recommendations (March 5, 2020), and Sections II and IV in MDACF's Technical Guidance for Utility-Scale Solar Installation and Development on Agricultural, Forested, and Natural Lands, both included in the Appendix.

Recommendations:
MDIFW and MNAP suggest adding the following recommendation to the list of currently in the Draft:

Recommendation 6: Incorporate natural and working land biological diversity values, specifically important wildlife and fisheries habitats, rare plant populations, and rare and exemplary natural communities into the framework of decision making around solar siting. In addition, natural and working land biological diversity values should be considered by the Distributed Generation Stakeholder Group as one of its objectives for solar grid planning and siting criteria.
Include in Appendix:

• MDIFW's Solar Energy Project General Resource Guidance and Recommendations (March 5, 2020). Can be accessed at:
https://www.maine.gov/ifw/docs/Solar%20Project%20Guidance.pdf

• MDACF's Technical Guidance for Utility-Scale Solar Installation and Development on Agricultural, Forested, and Natural Lands (January 8, 2021). Can be accessed at:
https://www.maine.gov/dacf/ard/resources/docs/solar-guidance-182020.pdf

Thank you for your consideration. Please let us know of any questions or concerns.

17. Heather Spalding - MOFGA

Thank you for the opportunity to provide comments on the draft report of the Agricultural Solar Stakeholder Group. MOFGA strongly support efforts to protect Maine farmland and keep it in agricultural production, while finding ways to reduce energy consumption and convert our fossil-fuel based energy system to renewables. Many MOFGA farmers are feeling the pressure of hayfields being sacrificed to solar arrays. We recognize that renewable energy systems like 20-100 megawatt solar

arrays take up a lot of space (100 to 500 acres) that could be used for other important climate challenges like wildlife habitat, and carbon sequestering fields and forests. We fully recognize that large solar arrays are cropping up on the Maine landscape and we know that more productive crop and pasture land is going to be lost to solar farms. We appreciate the time and effort that the stakeholders' group has put into minimizing impact on prime farmland and natural resources, while finding creative ways to encourage a transition to renewable energy systems. It is apparent that the initial recommendations are the product of a diverse stakeholder group and, while we would like to see more teeth in policies that protect Maine precious farmland, we understand that the recommendations of the group are important steps in the right direction.

The main message that we would like to underscore is that there is a critical need for balance when considering solar siting – the interests of Maine's farmers (current and future) and farmland protection (a delicate and finite resource) should garner at least as much consideration as the interests of developers. The state needs to do all it can to support farm viability while protecting farmland. A key component of farm viability is ensuring that beginning and future farmers have access to farmland.

Regarding the specific recommendations:

1. We think that the prospect of a centralized clearinghouse of information, akin to the Maine Healthy Soils Program's one-stop-shop for information, will be very helpful for all stakeholders.
2. Dual-use projects seem to have the greatest promise for minimizing solar arrays that intersect with farmland. Classifying solar infrastructure as ag infrastructure if the operation is meeting the terms of the dual-use classification would be helpful to farmers and we like the incentive of keeping dual-use land in the current use program. We also appreciate the recommendation to explore permit by rule for dual-use projects.
3. Establishing a mapping system that would help developers focus on appropriate, logical and efficient sites for development seems like a good strategy. It would be good if this tool could educate prospective developers about areas that really should be avoided because of the high value to Maine's agricultural future.
4. We appreciate that municipalities are scrambling to keep up with project proposals and we know that municipal officials generally need more technical support when it comes to state program requirements. We have heard this concern from the Maine Municipal Association in various stakeholder groups that have come out of the past Legislature – e.g. Housing Commission, Forest Stakeholders. As the proliferation of solar farm projects becomes more real and daunting, municipalities will need more and more support for balancing the interests of various stakeholders and being essential partners in building a healthy and viable Maine agriculture.
5. The report lays out the recommendations in no particular order of priority but the last one really should be the guiding principle. The State's long-term contracts should be upheld as models for sustainability and, therefore, should elevate the importance of farmland and natural resource protection.

We do hope that as the discussions and possible legislation ensues, there will be more emphasis on identifying agricultural lands that the state will shield from development including solar arrays. We understand that the report is more carrot than stick but the concepts of discouraging development, possibly even prohibiting development, need to be explored.

The metrics laid out in the report indicate that we have great potential to increase our crop and grazing

land. Maine's climate action plan calls for a dramatic increase in the amount of food that is both produced and consumed in Maine -- from 10% to 20% by 2025 and 30% by 2030 through local food system development. Solar power is not human food. If we are to become more self-reliant in our food supply we will need to put much more land into agricultural production.

MOFGA's vision for the next decade is to transform the way Mainers relate to their food. This vision includes farms that are helping mitigate climate change while making a good living that allows them to support their families and our communities. We are working to build a future where every Maine child, regardless of race, religion, gender identity, geography or socioeconomic status comes home to plenty of healthy local, organic food. This will only happen if Maine's agricultural sector is thriving economically, with healthy soils and renewable, affordable and appropriately located energy systems.

Finally, I've attached a recent article that you may find interesting.
https://e360.yale.edu/features/putting-solar-panels-atop-parking-lots-a-green-energy-solution

18. James A. H. Hafner – Land For Good

We appreciate the opportunity to comment on the draft report of the Agricultural Stakeholder Group. We commend the State of Maine for acknowledging the rapid growth of solar energy taking place in the wake of recent policy changes. And, we are grateful for the work of the Agricultural Solar Stakeholder Group and its focus on assessing the impact of solar development on Maine's prime farmland, soils and farm businesses.

We offer the following input based on Land For Good's nearly two decades of work in Maine and New England on issues of farmland access, land tenure security and farmland transfer and succession. During that time, we have provided technical assistance, training and policy input with and for thousands of farmers, farmland owners, community members, land trusts and other allied farm service providers and policy makers.

Access to farmland is a top barrier to the start-up and long-term economic viability of new farm businesses, and by extension the health and resiliency of the Maine farm economy and its communities. Keeping land in farming is especially important to create and hold open future opportunities for the next generation of farmers to access land. Given the significant amount of land and farm assets that will transfer in ME out of the hands of older farmers - many of whom lack identified successors - prioritizing development that keeps land in active agricultural production is essential. While many landowners are seeking an additional way to combat climate change and certainly solar on farmland (dual-use or other) can help diversify an owner-operator's farm income, many farmland owners are also prioritizing energy production over food production.

We believe the draft report and the work of its ad hoc task forces represents an important next step toward arriving at an appropriate and informed balance between supporting energy development while ensuring that solar development supports farm viability broadly, without unduly displacing farmers and food production. This means considering how proposed development criteria ensures that our best agricultural land is not developed, as well as looking holistically at farmland use and farm operations in the state to ensure that we are not unduly hampering the expansion of farming opportunity in the future, and undercutting the goals of feeding Maine and New England in order to meet the state's energy goals.

We support the recommendations for a dual-use pilot program, more municipal technical assistance, and removal of the withdrawal penalty for dual-use projects on land enrolled in current use taxation. We see these as allowing more dual-use projects in order to investigate the best ways to support various types ag production in them, to assess unintended consequences associated with those projects, and then to develop more refined criteria, and bring down their costs.

However, we are concerned that the incentives to encourage dual use and their related siting criteria do not work at cross purposes of encouraging or prioritizing development on non-ag sites.

We do recommend that the draft report could be stronger in communicating the prioritizing of solar on non-ag land. For example, we recommend that the Table on page 20 that summarizes the "list of siting attributes" should be reformatted to lead with non-agricultural land to reinforce this priority, the stated caveat notwithstanding. (i.e., "The following table should not be interpreted as preferring one type of activity over any other for policy purposes, or be included as part of any regulatory agency's permitting decisions, without further analysis and stakeholder input.")

We also have concerns over the details of how the "farm viability" requirement of "dual use" will be operationalized. We are particularly concerned about the implications of dual-use for farms that currently rely on leased land. Put simply, the ideal of dual use in specific cases must contend with the reality that farmer input is often secondary to landowners' decision making on leased land. We would like to see future analysis at a sector level, to estimate the potential impact of solar leasing on the farm businesses that rely on that leased land now? And, how would this impact the growth of agricultural production and farm businesses into the future? Also, assuming that 13% of farmland that is leased in Maine, how much of this land is prime farmland? On a project level, we hope there will be future opportunities to address additional specific recommendations to better balance benefits against the potential impacts to important environmental and agricultural resources as part of the permitting criteria, possible mitigation measures, and otherwise assessing specific projects that impact farm and forest land.

Finally, the possible provisions for dual use on land enrolled in current use taxation require greater specification. What body will ensure that a landowner or developer has an agreement with a farmer to provide grazing services to ensure the land will comply with current use taxation requirements? What leverage might a farmer have beyond the penalty of current use taxation to convince a landowner to maintain what may be a relationship spanning decades? In certain parts of the state, the removal of the current use withdrawal penalty for dual use projects on such enrolled land may have negligible effect. What are the implications therefore for how lifting a current use withdrawal penalty may incentivize dual use on certain classes of farmland and not others? In many cases farmers provide ecosystem services and land management that provides a community benefit. Farmers' compensation for this community benefit is derived primarily through crop harvest. Not all crops in a dual use scenario would adequately compensate a farmer to provide this benefit.

Some of these concerns are illustrated by the context and comments from our Maine Field Agent, Abby Sadauckas. Abby is a long-time Maine farm service provider and a farmer.

"The operation I run alongside my fiancé and his family is Apple Creek Farm. Our farm leases more than 70 acres of hay land in Bowdoinham. The majority of this leased land is owned by non-farming landowners who are at or past the age of retirement. In most cases, it is unclear whether the land, which is a significant asset, will stay in agriculture after their period of ownership. In my first decade of farming, I've already seen agricultural acreage lost

to housing development in our town. Solar development represents another potential threat that may continue to make it challenging for new farmers like us to find affordable, accessible land to support our goal of feeding our community. In most cases our farm could not afford to purchase the land we lease and we are certainly not able to compete with the market rate of lease payments that solar developers are promising land owners. Our farm leases are secured by our relationships with landowners, their trust in our stewardship and their desire to keep land working. Part of the benefit for these landowners is that our farming activities maintain their eligibility for current use taxation. In many cases it would be difficult to create a "dual-use" that would permit us to continue to make hay from this leased land. The use for solar development would displace hay activity. And, additional costs would be incurred to transition our use from making hay to grazing livestock. These might include a well to provide water and would not improve our farm's viability because we would still need to purchase hay from elsewhere."

In short, we hope the draft report will more strongly reiterate that we need to find the right balance between supporting renewable energy development while ensuring that solar projects are sources of economic support on farms and also do not simply displace ag production, remove the state's best farmland and soils from of agricultural use, displace farmers who rely on rented land, and add to the already significant challenges current and aspiring farmers face in accessing land.

Maine cannot afford to achieve its laudable and ambitious renewable energy and climate change mitigation goals at the undue expense of its current and future farm businesses, ag land stewards, food security, and prime farmlands.

Both Abby and I look forward to future opportunities to contribute to the work of this Group and subsequent processes informed by it.

19. Lexie Hain – American Solar Grazing Association

The American Solar Grazing Association (ASGA) is nearly 450 members and growing, representing both solar firms and member farmers in 40 states and across 5 continents - we work to develop tools and standards for our industry.

Report page 19 – Conclusions and Recommendations

Definitions of dual-use and co-location.

The group discussed and agreed to the following definitions for the terms "dual-use" and "co-location." These definitions distinguish between two related but separate concepts that the Stakeholder Group discussed extensively. These definitions could serve as a conceptual starting point for more refined definitions as needed to implement the Stakeholder Group's recommendations.

"Dual-use" projects involve the installation of solar photovoltaic panels on farmland in such a manner that primary agricultural activities (such as animal grazing and crop/vegetable production) are maintained simultaneously on the farmland. To qualify as dual-use, the solar installation must

1.retain or enhance the land's agricultural productivity, both short term and long term

How would this be measured? Which benchmarks would you use, and which authority would regulate?

Would the State of Maine use financial metrics such as agricultural outputs or job creation? Or performance benchmarks such as soil health and crop disease resistance?

Soil protection measures are only one element of agricultural productivity, both active and future.

ASGA recognizes that responsible care for the land and soils at solar facilities should be an important factor in the permitting and operations phase of renewable energy projects. The New York State

Department of Agriculture and Markets has developed a document with strict guidelines to protect and conserve soils. This document could be a valuable resource to Maine.

2. Be built, maintained, and have provisions for decommissioning to protect the land's agricultural resources and utility, and

ASGA has seen other states that require decommissioning bond provisions as a condition of granting renewable energy project construction permits. It is recommended that Maine manage decommissioning at a state level as it will provide the State of Maine a consistent platform to oversee and regulate decommissioning provisions.

3. Support the viability of a farming operation.

This requirement is vague - a farming operation could be supported by the lease income alone from a solar contract. Note the IEER report published in 2020 may provide a different lens on the question of financial viability at agricultural operations with an installed solar facility.

Notably, this requirement obligates the solar company to permanently partner with a viable agricultural operation. This may be challenging for solar companies to achieve unless solar grazing and solar beekeeping, existing forms of agriculture in "dual-use" solar, are the primary dual-use activities.

ASGA suggests the State of Maine research and consider pairing solar grazing contracts, solar beekeeping contracts, and other similar tools to facilitate agricultural integration at ground-mounted PV operations.

Dual use solar in the United States, as per the current working definition by the State of Maine working group, exists in two categories. The first is either a field trial or research-level build out. Jack's Solar Garden in Longmont, CO and the Solar Saffron Beds at the Peck Electric Farm, Vermont are working examples of agrivoltaic projects that include crop production. The second is solar grazing, which supports farmers who run grazing businesses across 12,000+ acres in 32 U.S. states. Many of the solar sites that host grazing have improved and customized seed blends, improved fences, interior fences, and host water supplies, among other factors. They also typically function with a contract for vegetation maintenance services. Arguably dual-use solar in the United States is found at facilities designed for solar grazing.

ASGA recommends that, should the State of Maine pursue a qualification for farm viability on agricultural lands hosting solar facilities, that the submission of a standardized set of filings under the umbrella of a Farm Business Plan be considered. It should be updated at regular intervals.

ASGA recommends that agricultural integrations at solar facilities such as seed selection, specified fencing and water supply, as well as solar site modifications to facilitate access for livestock or harvest equipment, etc., be considered by solar developers during the permitting process and implemented as part of the construction process.

If agricultural viability is to be considered as paramount to the functionality of a solar facility, then the solar firm should be recognized for these expenditures. Perhaps the funds spent by the solar firms on agricultural integrations should be allowed a separate tax designation? Should the PILOT process recognize these expenditures? A project PILOT or similar process may be best suited to recognize these expenditures and allocations.

The integration of these agricultural practices could and should be recognized by the State of Maine as the regulatory structure is determined. Just how much in the way of these practices are required to

ensure viability, and therefore ensure a permit for the construction of a solar facility, should be carefully weighed by the State decision makers. What will be enough to qualify a solar facility as "dual-use?" Will efforts to implement agricultural practices be measured based on effort expended? Or dollars? Or capital improvements elsewhere at a host farm?

Report page 19 – Conclusions and Recommendations

Definitions of dual-use and co-location – continued

In contrast, "co-location" generally involves traditional ground-mounted solar installations that host non-agricultural plantings with additional environmental benefits. For example, co-location can include grazing of animals as part of planned vegetation management, planting pollinator habitat, or planting ground cover or other plant species to benefit the surrounding ecosystems. Co-location may also involve siting a more traditional solar installation on a portion of farmland, while retaining other farmland for agricultural use. This may prove to be one way to help support the continued viability of farm operations; but it is not dual-use solar.

There is precedent, mostly from European solar development, for integrating conservation measures at solar facilities. The United Kingdom's SPIES tool is a decision-making matrix for solar companies, facility operators and municipalities interested in a science-backed approach for goal setting at solar sites. A variety of conservation initiatives can be explored virtually and tested using this tool. [Link to video here]

It is our experience at ASGA and our advice to the State of Maine that the efforts to integrate agriculture into solar site land management do not exclude opportunities to integrate conservation goals and the potential benefits of ecosystem services and restoration.

Note that 'pollinator friendly solar' initiatives are just one element of conservation-based land use planning at solar facilities. However, these should not be employed to the exclusion of other ecosystem services, ecosystem restoration efforts or agricultural dual-use initiatives.

Page 22 - Recommendations

Based on its research, discussions, and additional input received from the public, the Stakeholder Group advances the following recommendations. Recommendations are numbered for reference only, and not to indicate prioritization of any given recommendation over any other.

Recommendation 1: Creation of a centralized clearinghouse of information.

The Stakeholder Group recommends the creation of a centralized clearinghouse of information related to approved and constructed solar projects. This clearinghouse should include information related to key siting characteristics, including but not limited to the amount of agricultural land and the types of soils that are impacted by deployed projects. This recommendation should be implemented by DACF using permitting data from DEP overlayed with NRCS soil maps on an annual basis.

The National Center for Appropriate Technology (NCAT) launched the Agri-solar Clearinghouse in November 2021

Maine doesn't need a solar SITING clearinghouse – it needs state level guidelines that directs municipalities. The State of Maine mandated renewables, including solar. It should take responsibility for providing the guidance that gives developers and stakeholders the right tool kit for implementation.

Recommendation 2:

Dual-use pilot program: The Stakeholder Group recommends establishment of a pilot program for dual-use projects. The pilot could provide an opportunity for DACF to work with GEO, the PUC and other agencies to further explore the potential for dual-use in Maine using New Jersey's dual-use program as a model. Projects meeting dual-use criteria could be supported with a

financial incentive, a location-based waiver, or other benefit as determined by the program. The pilot would provide opportunities to conduct necessary research on compatible crops and other dual-use systems to determine best practices for dual-use within a defined timeframe or capacity limit. The pilot program should be developed by DACF and GEO in collaboration with other agencies and research institutions and should include innovation and data collection as priorities and be financially supported by the legislature.

Does this recommendation pertain only to dual-use and the exclusion of co-location? If the recommendation includes co-location, it should be noted.

It is unfortunate that while this recommendation advocates for the DACF and GEO to collaborate with others, simultaneously, in a unique, parallel process to the work of this Stakeholder group, Maine was developing best management practices for animal grazing on solar sites. These BMP's will impact implementation of dual-use on solar sites across the state. This second working group failed to include input or resources from the American Solar Grazing Association (ASGA), the only industry association representing landowners, farmers, graziers, solar developers, researchers, and educators actively engaged in the practice of dual-use across the United States. ASGA would have been happy to freely share resources and on-the-ground experience with crafters of the Maine solar grazing BMP's. Perhaps there will be a future opportunity?

20. Goranson Farm

Thank you for extending the feedback deadline on this important issue. I think you will find a reduced farmer response due to the season. Many of us are still battening down the hatches for winter and catching up on the bookwork postponed during harvest. If public comment was offered until January you would see significantly greater farmer feed back. Farmers have no lobby. We are our own secretaries, outreach coordinators, etc and don't have the financial muscle of solar development companies. We hope this is taken into consideration as you review our comments.

Our family found the table on page 20 of the report discouraging.

Prime agricultural soils are a limited, valuable, and irreplaceable resource. Once these soils are developed, they are lost. These prime agricultural soils must be protected to ensure resilience of our region's food supply. There should be NO encouragement or incentives for the development or dual use of prime agricultural soils.

We would like to add that Prime ag soils vary depending on the crop. Soil classification should take this into account. For example, ground ideal for the production of wild blueberries would struggle to grow a carrot. The USGS soil survey does not take this into account.

The table on page 20 should be changed and articulate the need to protect and preserve Maine's Prime Agricultural soils for future vegetable and row crop production.

Clarification/Definition of "Soils of statewide importance" would be extremely helpful. We couldn't locate the definition within the Draft Report. This is also an area of concern.

We believe that solar electricity generation is required to curb carbon emissions. We have one completed solar project on our farm and plan to install another this coming year. We chose to locate our panels on poorly drained, heavier clay soils unfit for tillage. We also chose panels that track to reduce

footprint and allow for grazing of livestock. Guidelines for Dual use installations should be drafted and defined by the committee. Greater incentives should be given to those solar installations that choose to pursue dual use developments on poor agricultural soils.