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September 3, 2021

Daniel E. Orodener
Executive Officer
State of Hawai'i Land Use Commission
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, HI 96804

Re: Application for Approval of a Special Use Permit Application —
SP21-412 — Mahi Solar, LLC Project

Dear Mr. Orodener and Commissioners:

Ulupono Initiative (“Ulupono”) is an impact investment firm based in Honolulu, Hawai'i, that strives to improve the quality of life for the people of Hawai'i by working toward sustainable solutions that support and promote locally produced food, renewable energy, clean transportation, and better management of water and waste. As a proponent of both renewable energy and local food production, Ulupono believes the Mahi Solar Special Use Permit (SUP) request presents an opportunity for the Land Use Commission (“Commission”) to expand upon the intent of Hawai'i's land-use laws that seek to promote the dual use of agricultural lands.¹

Over the last several years, a significant amount of concern has surfaced given the competition for land that is suitable for both farming and renewable energy production throughout Hawai'i. As a result, amendments to the state's land-use laws have been made to: (1) encourage the compatibility of solar photovoltaic (PV) infrastructure and agricultural operations; and (2) protect some of Hawai'i's more productive agricultural lands.

¹HRS Chapter 205, Section 4.5(a)(21) — Solar energy facilities on lands with soil classified by the Land Study Bureau's detailed land classification as overall (master) productivity rating B or C for which a special use permit is granted pursuant to Section 205-6 provided that: (A) the area occupied by the solar energy facilities is also made available for compatible agricultural activities at a lease rate that is at least 50 percent below the fair market rent for comparable.



While Ulupono generally supports these past measures, the Mahi Solar Agriculture Plan (“Ag Plan”) highlights the potential benefits available to both the state’s local food production and renewable energy goals if commitments offered by solar developers are guaranteed, as well as properly evaluated by decision-makers.²

As an organization invested in furthering statewide sustainability and resiliency objectives, Ulupono is aware of the complex nature of decision-making, particularly when a project anticipates having an impact (positive or negative) on several of Hawai‘i’s policy goals.

To better understand the issue of land availability and the potential tradeoffs of adding more renewable energy onto the system, Ulupono worked with Dr. Matthias Fripp, Associate Professor of Electrical Engineering at the University of Hawai‘i at Mānoa, to model the potential impact on available agricultural lands from future utility-scale solar development. The modeling revealed that if Class B and Class C agricultural lands are not protected beyond existing measures, roughly 50% of Class B Lands (12,524 acres) and 20% of Class C agricultural lands (2,158 acres) could be used for future solar development.³ As utility-scale solar is most commonly under contract for at least twenty years, it is unlikely that affected agricultural lands will be able to be used for its original intent without solar developers making concessions/commitments to support food producers.

With the above in mind, Ulupono offers an Agricultural Impact Framework (“Framework”) to help decision-makers better evaluate the benefits and full costs of renewable energy projects and their impact on Class B agricultural lands when reviewing SUP requests, such as the Mahi Solar SUP. Ulupono hopes the Framework will be, at a minimum, useful as a starting point to better understand the societal value of key agricultural lands, and ensure that Hawai‘i’s finite lands are properly valued and accounted for as renewable energy projects continue to be developed throughout the state. Left unchecked, Hawai‘i runs the risk of losing a significant portion of highly productive agricultural lands and will likely remain dependent on importing the vast majority of the islands’ food (estimated to be 85%).

Agricultural Impact Framework

The basic premise of the Framework is to identify: 1) the agricultural value lost when a solar project is allowed to develop on Class B agricultural lands; and 2) attempt to mitigate the value lost through financial commitments or incentives that equal or exceed the value lost from the development of the solar project. The considerations for the Framework are identified in the table below with basic descriptions and examples. We envision these considerations being addressed in an agricultural plan submitted by the developer requesting an SUP. Ulupono also suggests that the agricultural plan become a required document of the SUP application process when applicable.

Considerations	Description	Examples
Agricultural Value Lost	Quantify the lost value of the production of food on the	<ul style="list-style-type: none">Actual or historical annual value (in dollars) of food production on land

² See Mahi Solar SUP Application, Appendix C — Mahi Solar: Agricultural Plan — March 2021.

³The percentage and acres estimated to be affected are based on the following assumptions: (1) all available B and C agricultural lands can be used for development of utility-scale solar and (2) utility-scale solar can be developed on land with up to a 15% grade/slope.

	desired land parcel (or potential production)	<ul style="list-style-type: none"> Value (in dollars) of land and infrastructure on land parcel
Agricultural Offset	Quantify the value of the developer's commitments to onsite local food production and/or other local agricultural initiatives in Hawai'i	<ul style="list-style-type: none"> Annual direct food production value incentives that reduce rent or investment costs for farmers Number of farmers to benefit from developer's commitments versus farmers directly impacted (in the surrounding affected region)
Value of Commitments to Agriculture	Commitments offered by the developer to the site, affected farmers, and/or the surrounding "Ag community" must be guaranteed with clear, tangible value that is/can be utilized by the targeted recipient	
Enforcement Mechanisms	Enforceable tools and/or processes established that allow the regulators to ensure that the developer is held accountable to stated commitments and are acted upon within a reasonable time frame	

After reviewing and analyzing the developer's agricultural plan, Ulupono would like to see the regulatory agency then conduct a high-level cost-benefit analysis ("BCA") to determine whether the agricultural offset offered by the developer outweighs the agricultural value lost from removing affected parcel(s) out of current or future production. Ulupono strongly believes that in order for a SUP to be granted, the agricultural offset must equal or exceed the agricultural value lost.

Ulupono suggests that "agricultural value" be defined based on actual or historical agricultural crop production value of the affected site. For example, if land is currently in production, a crop valuation shall be given to the price per crop, per acre, per year based on farm-gate sales. If the land is fallow, the historical production values shall be used to determine crop valuation and assumed current day farm-gate sales. Agricultural value could also be defined by readily available infrastructure and resources located on the affected site. For example, land is considered more valuable if it has irrigation, water resources, processing or accessory facilities on property or nearby, or even roads and electricity access. Each of these factors holds a high value for any current or future agricultural operation and directly impacts the potential production value of the land.

The "agricultural offset" should be defined as the developer's financial investment to agricultural producers directly affected by the proposed project; or, if no active producers are directly affected by the proposed project, the agricultural industry for that particular region. Ulupono believes the agricultural offset should be applied initially to maintaining or growing active agricultural production on the project site. The developer could identify a list of proposed incentives to encourage producers to actively cultivate on project lands, including going beyond the minimum 50% below market rent as stated in Hawai'i State Law. For example, incentives offered may include, but are not limited to:

- 1) highly discounted leases such as \$1 per year;
- 2) land preparation such as clearing and maintenance;
- 3) security such as fencing, alarms, and cameras; and/or
- 4) free or highly discounted utilities such as water and electricity.

It is possible that a developer may not be able to garner interest from producers after promoting the incentives within a reasonable amount of time (12-18 months). In this instance, Ulupono

believes the developer should then be allowed to make a direct contribution to the agricultural industry in the affected region. The amount of the direct contribution should be based on the annual agricultural offset BCA. Ulupono also anticipates the contribution will be made on an annual basis.

More importantly, Ulupono suggests that the regulatory agency consider the offered agricultural offset(s) as valid only if the incentives are: (1) relative to what producers actually use and (2) guaranteed. Simply offering incentives without basis or guarantee does not meet the agricultural offset requirement suggested above, and as such, should not be considered as an offset. Noting this consideration, the Framework above identifies the need for enforcement mechanisms to guarantee the commitments. Enforcement mechanisms could range from rescinding a project's SUP to a financial penalty incurred by the developer if the offset is not provided within a reasonable amount of time.

Ulupono appreciates the opportunity to offer comment on this important issue. The comments above are ultimately guided by Ulupono's desire for a process that thoroughly considers the challenges inherent to achieving Hawai'i's commitments to both renewable energy and local agricultural production, and more meaningfully balances the associated tradeoffs that are specific to Hawai'i's valuable and limited agricultural district lands.

Sincerely,

Murray Clay
President