ADMINISTRATIVE REPORT

TO: Board of Directors

FROM: J. Zaffino, Chief Administrative Officer

DATE: March 20, 2025

RE: Agricultural Land Commission Referral (Non-Farm Use) – Electoral Area "C" (C2024.009-ALC)

Administrative Recommendation:

THAT the RDOS Board "authorize" the application to allow a "solar energy system" as a non-farm use on the parcel located at 4353 Ryegrass Road (Lot A, Plan 18096, District Lot 2450S, SDYD) to proceed to the Agricultural Land Commission.

Purpose: To allow for the installation of a solar energy system. Folio: C-06519.000

Civic: 4353 Ryegrass Road Legal: Lot A, Plan KAP18096, DL 2450S, SDYD Zone: Agriculture One (AG1)

Proposed Development:

An application has been submitted to the Agricultural Land Commission (ALC) under Section 20 of the *Agricultural Land Commission Act* (the Act), and referred to the Regional District, in order to allow for the development of a "solar energy system" as a non-farm use within the Agricultural Land Reserve (ALR).

Specifically, the applicant is seeking the Commission's approval to allow for the installation of solar panels over 33% of the subject property.

In support of this proposal, the applicant has stated that:

> *the primary purpose of this proposal is to enhance our ability to grow grapes by protecting the crops using … solar panels above (the vines) and a ground source heat pump system along with air movement system … under the panels to prevent damage from frost, winter kill from extreme temperatures, and stress from heat, humidity and drought. The generation of renewable electricity would be a significant added benefit.*

The applicant has further stated that the proposed agrivoltaics system includes a series of solar racks that support solar panels, irrigation, data collection, and rail-mounted robotics drive head that connect to various attachments for weeding, testing and picking of fruit, pruning and tying vines, and a glycol heat and air current system. This system is aimed to address specific issues of winter freeze, heat domes and drought conditions.

Statutory Requirements:

Under Section 34.1(2) of the *Agricultural Land Commission Act,* the Regional District of Okanagan-Similkameen (RDOS) must "review the application, and … forward to the commission the application

together with [its] comments and recommendations", unless Section 25(3) applies wherein the Board has the ability to refuse to "authorise" an application.

Under Section 25(3) of the Act, formal "authorization" by the Regional District Board is only required for applications that apply to land that is zoned by bylaw to permit farm use, or requires an amendment to an official community plan or a zoning bylaw.

In this instance, Section 25(3) is seen to apply as the property "is zoned by bylaw to permit [an] agricultural or farm use" and an amendment to the Electoral Area "C" Official Community Plan and Zoning Bylaw will be required in order for the development to proceed.

Site Context:

The subject property is approximately 17 ha in area and is situated on the south side of Ryegrass Road, with a portion of the subject property adjacent to Okanagan River. It is understood that the parcel is comprised of a single detached dwelling and the majority of the property is utilized for agriculture.

The surrounding pattern of development is generally characterised by other agricultural parcels, along with various Parks and Recreation parcels and Conservation Area parcels.

Background:

The current boundaries of the subject property were created by a Plan of Subdivision deposited with the Land Titles Office in Kamloops on May 15, 1968, while available Regional District records indicate that a building permit for a single detached dwelling (1973).

Under the Electoral Area "C" Official Community Plan (OCP) Bylaw No. 2452, 2008, the subject property is currently designated Agriculture (AG), and subject of Watercourse Development Permit (WDP) and Environmentally Sensitive Development Permit (ESDP) area designations.

Under the Okanagan Valley Zoning Bylaw No. 2800, 2022, the property is currently zoned Agriculture One (AG1) which lists agriculture as a permitted principal use, and accessory buildings and structures as permitted accessory use.

Under Section 10.0 (Floodplain Regulations) of the Zoning Bylaw, the subject property is within the floodplain associated with Okanagan River, which includes minimum construction levels for structures supporting "habitable area", as defined by the zoning bylaw.

The property is located within the Agricultural Land Reserve (ALR), and BC Assessment has classified the property as part "Residential" (Class 01), and part "Farm" (Class 09).

At its meeting of February 6, 2025, the Regional District Board resolved to defer consideration of this Non-Farm Use application and further directed that it be referred to the Electoral Area "C" Advisory Planning Commission (APC).

At its meeting of February 18, 2025, the Electoral Area "C" APC resolved to recommend to the RDOS Board that this Non-Farm Use application be approved, subject to the following conditions:

i) That agricultural plants be planted under solar panels.

ii) That neighboring properties must be consulted about the possible glare and fan noise.

Analysis:

In considering this proposal, Administration notes that the purpose in restricting the use of farmland to agriculture and limiting maximum parcel coverage is primarily to protect and preserve the land's agricultural viability and ensuring it remains productive for farming.

In this instance, subject application represents a unique use of farmland where an "agrivoltaics" system is being proposed as an alternate form of power generation and one that may benefit agricultural use of the property and requires the consideration of a new use and parcel coverage not currently contemplated by the Regional District's land use bylaws.

To the extent that the OCP supports this type of development, it is in relation to encouraging secondary "value added" uses for the purpose of diversifying and enhancing farm income.

In support of this, it is understood that an "agrivoltaics" system *may* present the following benefits to an agricultural operation / farm:

- enhancing productivity in certain contexts by creating microclimates that benefit crops through a reduction extreme heat and lower water evaporation(e.g. by providing shade), which is potentially beneficial in an arid region such as the South Okanagan;
- allowing the same parcel of land to produce both food and renewable energy, thereby maximizing its utility;
- promoting renewable energy generation, thereby helping to reduce greenhouse gas emissions and contributing to climate change mitigation; and
- providing an alternate source of revenue, thereby making farming more financially sustainable.

Alternative:

Conversely, and of concern, the OCP specifically seeks "to preserve agricultural land with continuing value for agriculture for current and future production, and to protect this land from uses which are inconsistent with agricultural use …"

The Plan further speaks to encouraging "maximizing productive farm activity and minimizes non-farm use on farmland by limiting the footprint of non-farm uses" and it is not clear that permitting impermeable development (i.e. solar panels) over 1/3 of the subject property is consistent with these objectives and policies.

Administration further considers that other options are available to the proponent to generate alternate forms of energy, such as placing solar panels on non-ALR land, or siting the panels atop of existing structures.

Administration is also concerned about the extent to which the principal use of the land will remain agricultural and the generation of energy remains an incidental use.

Summary:

In summary, and for the reasons outlined above, Administration is recommending that this proposal be "authorized" to proceed to the ALC on the basis of the uniqueness of the proposal and that a determination as to whether this is an appropriate use of ALR lands *may* properly reside with the Commission.

Should this proposal be "authorized" by the Board and subsequently approved by the ALC, an amendment to the Regional District's zoning bylaw will be required in order to permit the use and possibly the issue of a development variance permit (DVP) to allow for an increase in maximum parcel coverage.

Financial Implications:

Financial implications have been considered and none were found.

Communication Strategy:

No communication strategy is proposed as the Regional District has been referred this application by the Agricultural Land Commission (ALC), and the Commission is seeking the Regional District's input on compliance with applicable land use bylaws. Administration considers any communication required in relation to this proposal to be within the purview and responsibility of the ALC.

Alternatives:

1. THAT the RDOS Board not "authorize" the application to allow a "solar energy system" as a non-farm use on the parcel located at 4353 Ryegrass Road (Lot A, Plan 18096, District Lot 2450S, SDYD) to proceed to the Agricultural Land Commission.

Respectfully submitted:	**Endorsed By:**	**Endorsed By:**
Jerritt Cloney		
Jerritt Cloney	C. Garrish	A. Fillion
Planner I	Senior Manager of Planning	Managing Director, Dev. & Infrastructure

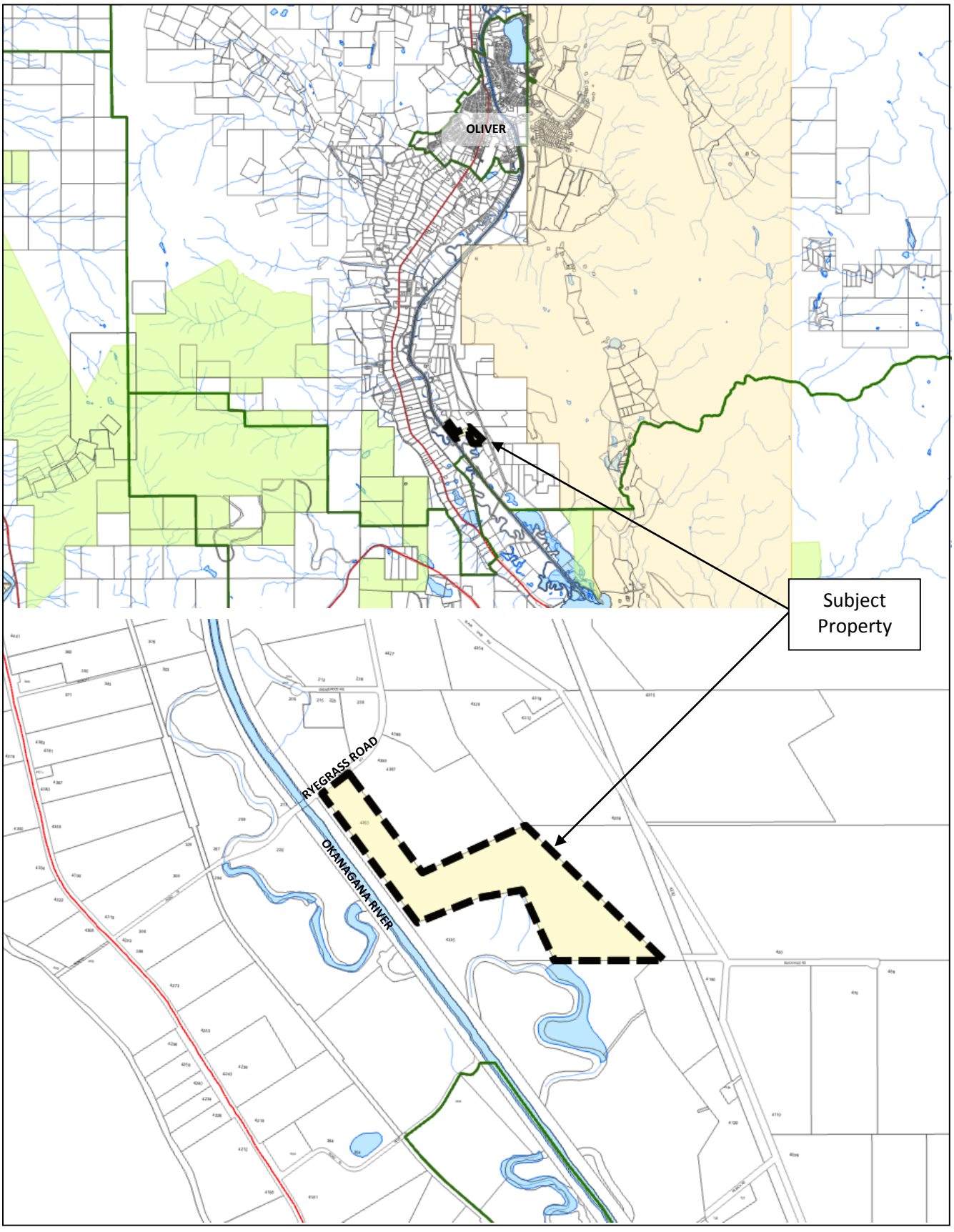
Attachments: No. 1 – Context Maps

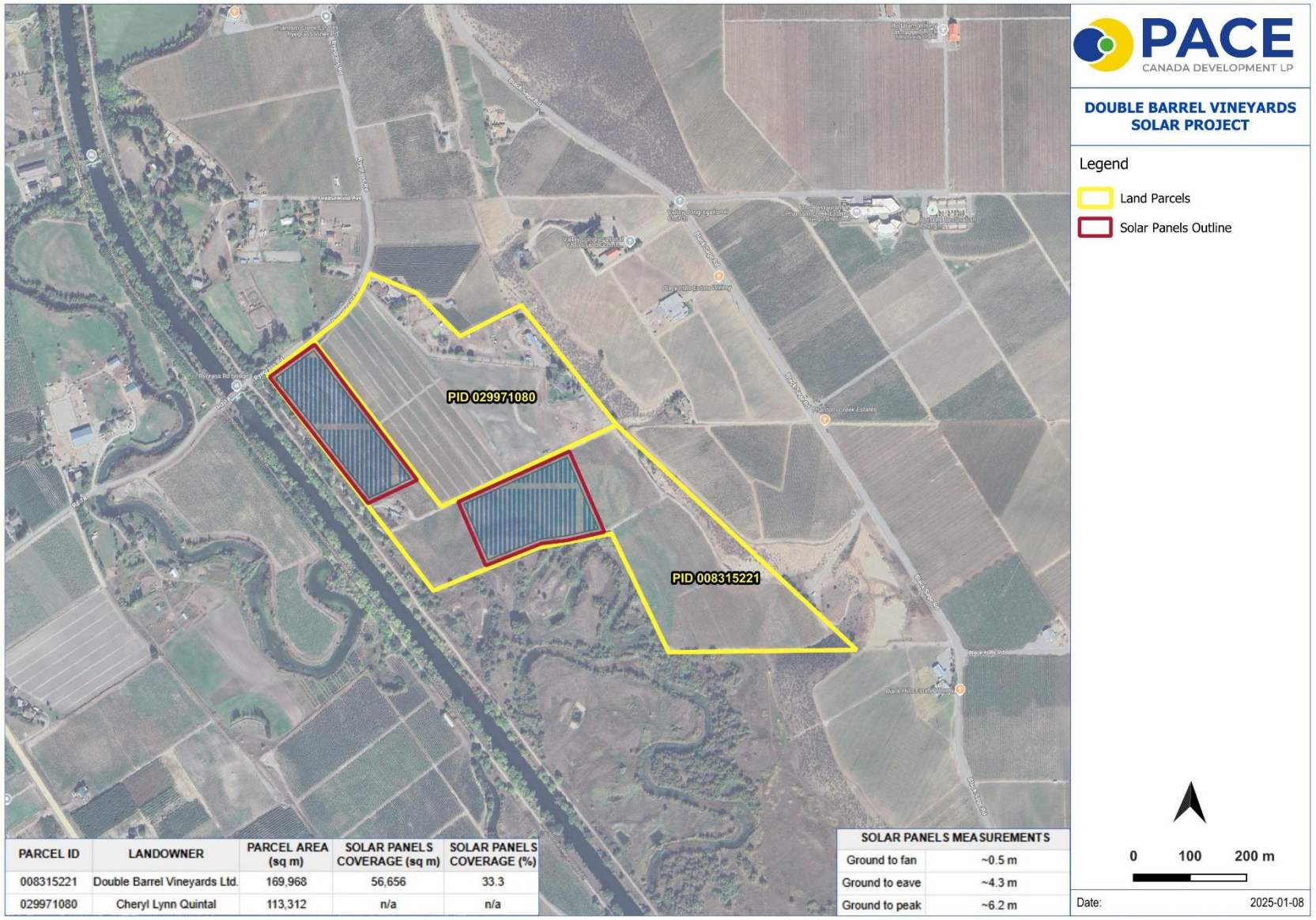
No. 2 – Applicant's Site Plan

No. 3 – Side View of Agriovoltaics System (Rendering)

No. 4 – Land Use Efficiency Examples

Attachment No. 1 – Context Maps

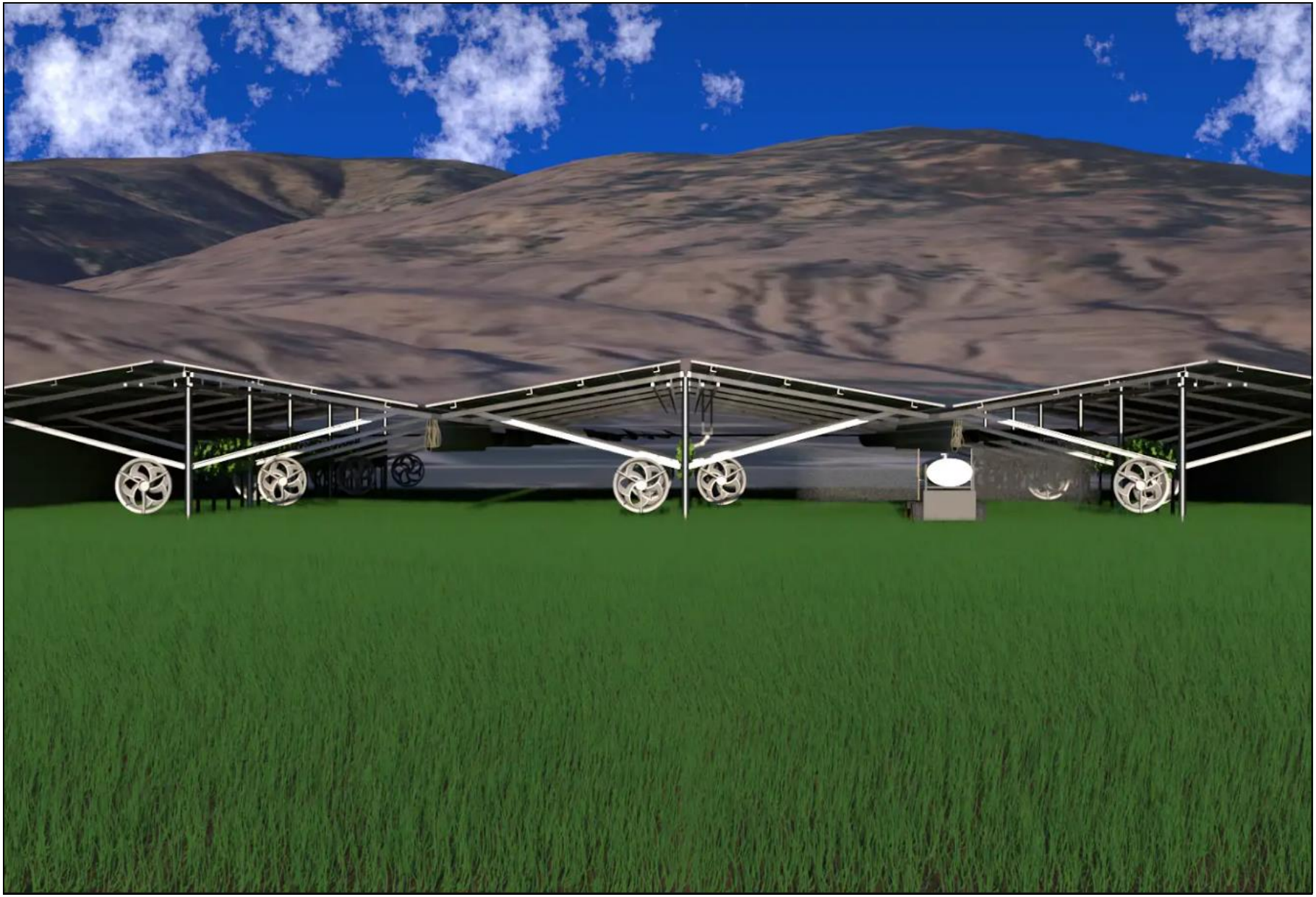




PARCEL ID	LANDOWNER	PARCEL AREA (sq m)	SOLAR PANELS COVERAGE (sq m)	SOLAR PANELS COVERAGE (%)
008315221	Double Barrel Vineyards Ltd.	169,968	56,656	33.3
029971080	Cheryl Lynn Quintal	113,312	n/a	n/a

SOLAR PANELS MEASUREMENTS	
Ground to fan	~0.5 m
Ground to eave	~4.3 m
Ground to peak	~6.2 m

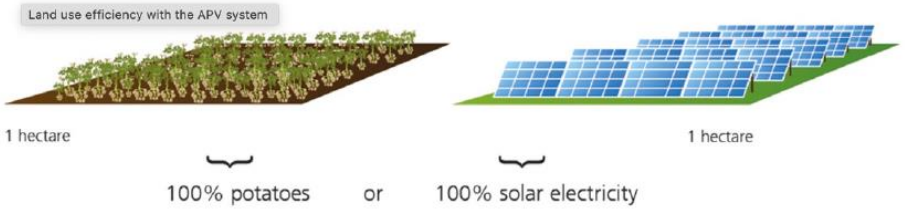
Attachment No. 3 – Side View of Agriovoltaics System (Rendering)



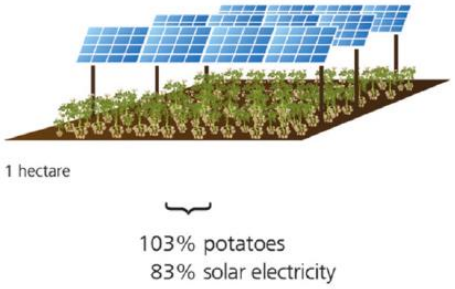
Increased Land Use Utilization

Agrivoltaics Canada

Separate Land Use on 1 Hectare Cropland: 100% Potatoes or 100% Solar Electricity



Combined Land Use on 1 Hectare Cropland: 186% Land Use Efficiency



Franhofer Institute for Solar Energy Systems. (April 2022). Agrivoltaics: Opportunities for Agriculture and the Energy Transition A Guideline for Germany. https://www.ise.fraunhofer.de/en/publications/studies/agrivoltaics-opportunities-for-agriculture-and-the-energy-transition.html

Jamil, U.; Pearce, J.M. (2023). Maximizing Biomass with Agrivoltaics: Potential and Policy in Saskatchewan Canada. Biomass. 3: 188–216. https://doi.org/10.3390/ biomass3020012