
AUSTRALIAN
NEW CHARGING SYSTEM
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Introduction

Dieter Horstmann
Founder & Director
Byron Eco Park Holdings Pty Ltd

To whom it may concern: Agro-Solar / Energy Transition

- There is an existing paper or concept titled **"Agrivoltaics Handbook"** published by the NSW Government: **https://www.energyco.nsw.gov.au/agrivoltaics -handbook**
- The **Department of Agriculture in Wollongbar** can provide guidance to local farmers on this topic.
- **Byron Shire Council** is planning its own solar farm at **Dingo Lane**.
- Rising rates **increase the burden on traditional farmers** who are then more likely to sell their land for development profit.
- Local **school bus companies**, Council trucks, and garbage trucks could transition to **electric mobility**, supported by **depot-based solar generation, or battery container.**
- The **MO Living Communities** project at East Tyagarah is an ideal site to demonstrate a **bidirectional, modern island-power system.and have meetings.**
- The **Eco-Farm (EF)** is close to **Highway 1**, the main Brisbane–Sydney corridor, creating opportunities for **electric truck charging hubs** and related businesses. Meeting with BSC, ASAP.
- New **sodium-ion battery storage** systems in **megawatt-scale containers** offer higher safety, C4-rated **do not require climate control**, making them suitable for transport between solar farms and e-truck exchange hubs.
- A regional solar capacity of **50–100 MW** within the shire would be attractive for **European-made technology** and could draw **European investment** into the Australian market. Farmers lease land to achieve additional income.
- These ideas may be discussed at **HM 26** in a live talk with **Dr. Lesch**, scheduled for **20–24 April**.
- Progress requires **action from Byron Shire Council**, collaboration with **Australian experts**, and integration of **existing European technical know-how**; regulated by Australian law and long-term contracts.

We are happy to answer any questions you may have.

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Correspondance

FW: Fast Charging - Heavy Vehicles Inbox
Lloyd, Alicia <alloyd@byron.nsw.gov.au>Thu 5 Mar, 14:36 (4 days ago)to me, Noah, Chris

Hi Dieter & Noah,

Great to meet with you both yesterday. I have sent this email to the NSW Fast Charging Grant team about future funding availability for heavy vehicle charging. I will let you know when they come back to me with a response.

Kind Regards
Alicia

Alicia Lloyd | Team Leader Sustainability | BYRON SHIRE COUNCIL
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Find us on Facebook www.facebook.com/byronshire.council

From: Lloyd, Alicia <alloyd@byron.nsw.gov.au>
Sent: Thursday, 5 March 2026 2:33 PM
To: 'evfc@environment.nsw.gov.au' <evfc@environment.nsw.gov.au>
Subject: Fast Charging - Heavy Vehicles

Dear EV Fast Charger team,

Yesterday we met with local residents about a concept to deliver fast charging for heavy fleet using solar farms and portable sodium ion batteries.

Unfortunately, Byron Shire Council is not in the eligible area for the current round of Fast Charging grants. Do you know if there would be future rounds of funding that consider special provisions for heavy vehicle charging?

The site for one of the solar farms needed would be here:
–Byron Eco Park Sustainability and Community Culture

Please let me know if you can provide insights regarding future funding opportunities.

Kind Regards
Alicia

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BYRON NEW ENERGY

Appendix A

Source: Agrivoltaics Handbook Dec 2025 NSW Gov Energy Co, Progressive Agriculture, Farm Renewables Consulting

Horticulture and crops under solar

Horticulture and solar – Guidance for considering opportunity and risk

Food security, renewable energy and decarbonisation are interconnected goals, however the concept of integrating solar panels over horticulture and cropping is still emerging in Australia. In contrast, many other countries have been growing crops beneath solar for decades.

In these agrivoltaics systems, food production is the primary purpose for the land and is complemented by solar, as opposed to energy generation being the primary land use as it is for solar grazing sites. One key reason is that stilted agrivoltaic systems typically require 20 to 40% more land to produce the same amount of energy as traditional ground-mounted solar systems.

This section of the Handbook provides guidance for solar developers and farmers interested in exploring small to mid-scale agrivoltaic systems for growing crops and horticulture under solar panels. Limited examples of solar over horticulture or crops exist in Australia, with more research required to progress the industry. While this form of agrivoltaics holds significant potential, the practice is still evolving, and as such, this section is not intended to be a definitive guide but rather a resource to raise awareness of some of the issues, risks and opportunities in agrivoltaics systems and how it relates to an individual's own circumstances.

Photo courtesy of BayWa r.e.

Appendix B

Source: Agrivoltaics Handbook Dec 2025 NSW Gov Energy Co, Progressive Agriculture, Farm Renewables Consulting

Horticulture and crops under solar

The opportunity in Australia

Australia holds considerable potential for agrivoltaics in horticultural regions, particularly with sub-5MW solar developments connected to the mid-voltage distribution network. These systems can provide behind-the-meter power to farm operations, while exporting excess energy at other times. Use of power produced by agrivoltaics behind-the-meter is particularly attractive when the network reliability around the farm is poor, adding to the business case for solar over crops.

While international experiences offer valuable insights, substantial research tailored to Australian conditions is still needed. The 2023 report, Pursuing an Agrivoltaic Future in Australia, outlines specific research needed for successful implementation.

Appendix C

Source: Agrivoltaics Handbook Dec 2025 NSW Gov Energy Co, Progressive Agriculture, Farm Renewables Consulting

Horticulture and crops under solar

Business Models for Agrivoltaics

There are several business models for agrivoltaics although typically, farmers do not own or operate the solar systems. Instead, they earn payments for the electricity generated or lease their land to solar developers.

Typical characteristics of this include:

- All risks and costs related to energy generation and infrastructure are the responsibility of the solar developer.
- Costs and risks related to farming activity are the responsibility of the landholder/farmer.[6]

A beneficial scenario occurs when the farmer has significant on-site energy needs, such as those in wineries, dairies or food processing, and can procure energy through a Power Purchase Agreement (PPA) with the solar developer or use the power behind the meter before it is exported. Placing solar over crops is relevant here if shed rooftop space is limited or structurally unsuitable for multiple solar panels.

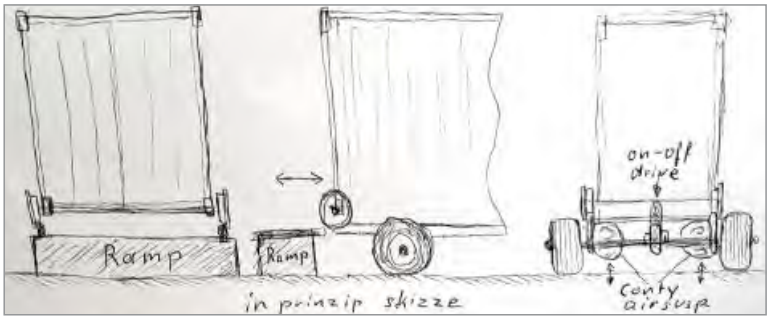
Solar Power Europe have a new AgriSolar Handbook, which covers a few of the more common business models being adopted, however these do not always translate to the Australian context.

[6] Agrisolar Handbook

Competitive Advantage

- CATL, the world's leading battery producer with around 60% market share, shifted its factories in Q3 2026 from lithium-based cells to sodium-ion cells, reducing production costs by approximately 60 percent.
- The next major development is the BYD Blade Battery in lithium–iron–phosphate chemistry. The BYD Blade 2.0 achieves over 1,000 km range and can charge from 10 to 97 percent in under 10 minutes. At –20°C, it charges from 20 to 97 percent in under 12 minutes.
- Sodium-ion batteries compared to lithium batteries last three to five times longer, and in some cases up to ten times longer depending on the cathode material. These batteries are maintenance-free.
- Current energy density is around 275 Wh/kg and may increase to 400 Wh/kg. This means a storage container could hold between 400 kW per tonne up to around 1.2 MW, or scaled systems reaching 5 MW of storage.
- Compared to traditional grid poles and wires, a containerised battery system is more reliable and allows short-distance transport of energy from a solar farm to an e-truck charging station. No temperature control is required, and DC-to-DC transfer at above C4 enables megawatt-hour transfers in around 15 minutes.

DIETER HORSTMANN CONCEPT ILLUSTRATION



- Parallel use of batteries for E-fuel production and grid integration creates new possibilities and makes profit generation clearer, potentially increasing returns by around 15 percent.
- Highway 1 through the Byron Shire is an industrial lifeline, and new technologies offer employment potential and broader economic benefits.
- By 2026, investment costs for electric trucks compared to diesel trucks are roughly equal. Operational costs for electric trucks are lower than diesel, and driving performance and travel times are almost identical. Environmental benefits apply equally to school buses, council vehicles, courier vans, and rubbish trucks.

DIETER HORSTMANN CONCEPT ILLUSTRATION

- DIN (Deutsch Industrie Norm) is a European industrial standard associated with *"Made in Europe"* quality and engineering reliability.
- The Fraunhofer Institutes have leading technology in high-power exchange systems in the range of approximately 750 kW to 1.5 MW.
- The Fraunhofer Institutes also have extensive experience in agro-solar farming.
- The Australian agricultural market has strong potential for electric trucks if the charging infrastructure is established. Sodium-ion batteries are the key game-changer enabling this transition.

INVESTMENT NO BRAINER

ETruckACS Energy & Infrastructure Concept Summary

Diesel vs Electric Freight Cost (SYD–BNE)

- Diesel truck fuel cost: Estimated over A$1,000 per trip (60ltr/100km).
- Electric truck energy cost: ~1000 kWh per trip × A$0.50/kWh = A$520 (130kWh/100km).
- Solar-powered charging: Energy cost per kWh ranges from A$0.11 to A$0.30, plus infrastructure offering clear profit margins over grid charging.

Deployment Timeline & Technology Readiness

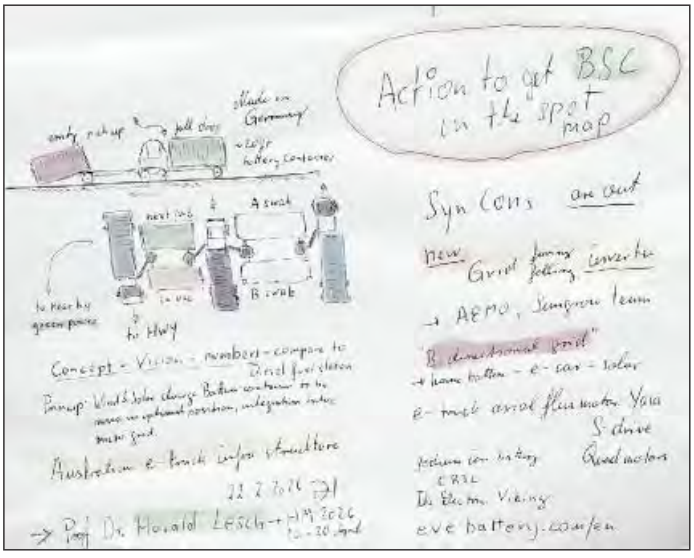
- 2026 launch: Initial infrastructure can begin at Eagle Farm, using known technologies:
  - Battery containers
  - Capacitor-based electronics
  - Bidirectional charging systems
- Scalable rollout: Expand via clustered microgrid islands (e.g., East Tyagarah), integrating:
  - Agro-solar farming
  - Bidirectional EV hubs
  - 50–100 MWh capacity across Byron Shire

Strategic Vision

- Position Byron Shire as a national showcase for:
  - “Made in Europe” charging stations
  - Global E-truck brands
  - Sustainable freight corridors on the BNE–SYD route

Expert Network & Political Engagement

- Kick-start opportunity: Byron Shire Council could take live action at HM 26, engaging with energy and transport experts.
- Existing contacts include:
  - Ex Siemens Australia: Dr. Bertram Ehmann, Warner Priest
  - Ex Volkswagen Wolfsburg, TU Braunschweig: Dr. Kurt Almstadt
  - ZSW Ulm, Jülich: Timo Kannengießer



DIETER HORSTMANN CONCEPT ILLUSTRATION

- ***Eagle farm has the first Aro solar farm DA in the Byron Shire.***
- ***Using the green energy for energy truck chargin is a starting point for more solar farms giving farmers sustainable income.***

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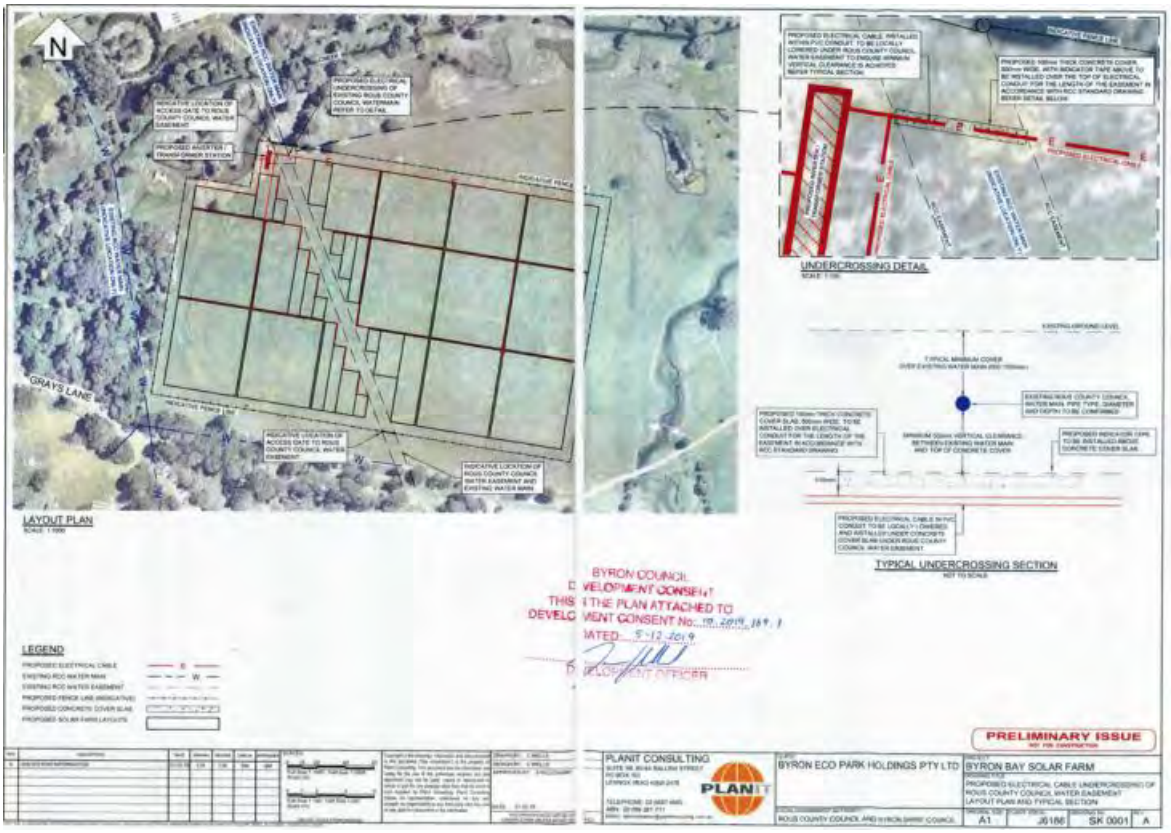
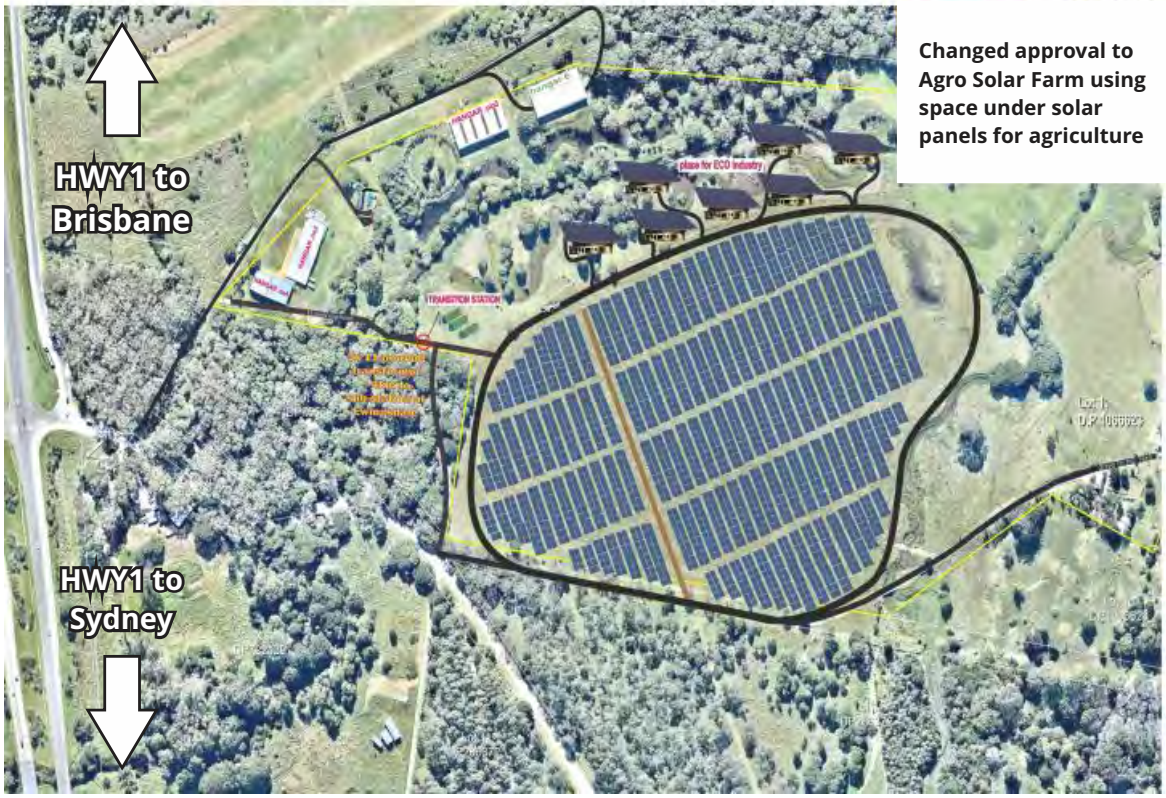
DA Tangible Asset





Changed approval to Agro Solar Farm using space under solar panels for agriculture

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OPPORTUNITY

BYD Installing 1500KW Fast Chargers Across Europe and China

(Possibility of similar service planned for Ballina NSW)

- Perovskite tandem solar tech know how suverenität EU
- e-trucker app Tobi > 600 kWh
- Spherity VERA battery pass
- Invest outside Europe to get more profit!
- Australia new E-truck charging system is a future profit market.
- Klima investicom found
- Grid infrastructure
- Mobile BYD container
- Make sense, less regulations
- Green energy into battery storage = still green!
- ETS Australia
- Infrastructure is NOT expensive – over/under investment – capital tax write off.
- New infrastructure competition between power stations – battery storage.
- Dark & no wind – no problem with e-storage.
- New market: E-battery mobility, no short street - long street or married order
- Don't “sit on the fence”

A win-win Umbrella

I believe the exploding technologies are giving the commercial etransport in Australia the advantage more than anywhere else in the world. Low risk investment opens up in multiple ways a win-win umbrella

DIETER HORSTMANN

Appendix D

Eagle Farm Pty. Ltd.

ABN: 46050059197

Eagle Farm Pty. Ltd. owns shares in Byron Eco Park, managing the property management.

Byron Eco Park Holdings Pty. Ltd.

ABN: 55619286350

App. 20 shareholders run the property business finance

Byron New Energy Holdings Pty. Ltd. *(for sale estimated 1M)*

ACN: 643551820

"Inside the fence": renting the *"race course"* from Eagle Farm Pty. Ltd. expecting similar shareholders *"outside the fence"* having a contract with farmers and Investors. Providing maintenance, logistics etc.

E-Truck Australian Charging System

Concept technology available to Manufacturers/Investors on a "Make an Offer!" basis.

More information and ebook download at our website:
www.etruckacs.com.au

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