



# On Farm Connectivity Program – Supplier Feedback

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RO 13/02/2023

## Introduction and Company Background:

The Agricultural Wide Area Network (AGWAN) is an ecosystem of hardware and software products, many of which are custom designed and built specifically for agriculture. The solution predominantly uses LoRaWAN digital radio technology, which is typically paired with the farmer’s existing home internet connection to transfer the data to AGWAN’s Australian based server, from where the data and resulting actions are then disseminated to client’s smartphones or via downlinks to other devices in the network where control actions are required.

The ecosystem allows farmers to rapidly respond to failed equipment or infrastructure, minimizing water loss, agricultural product waste and carbon emissions associated with traditional manual inspections of farm assets.

The AGWAN custom developed nodes have been designed, tested, and manufactured in Australia for the Australian agricultural market. Supporting products such as gateways, point to point Wi-Fi links, and MODBUS nodes are supplied by reputable international vendors.

AGWAN was launched in 2019 as part of EnergyLab's IOT Accelerator Program and is an Australian owned and operated business with an Australia based data server and Australian based programming team. Current AGWAN clients include the following properties:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]



## What equipment and services are most useful under this Program?

The most useful equipment and services depends on the type of operation, and as many of the AGWAN devices are part of an ecosystem, the capability of the system is not achieved unless multiple devices are acquired. For a sheep grazier, this may be a solar powered water pressure sensor node and a LoRaWAN gateway that will monitor their stock water system pressure and send them a text message notification. For an irrigated cropping operation, this may be the irrigator controller with the remote start function, along with a pump controller and dam level sensor, also paired with a LoRaWAN gateway.

## Is there equipment which should be added to this list?

A LoRaWAN gateway is an essential part of the AGWAN system, as it talks to all the nodes around the property. This is equipped with Wi-Fi backhaul, so may fit into the “Wi-Fi Solutions” category but may also be considered a “repeater” however it transmits data in LoRaWAN packets and not typical TCP/IP format, so it is converting the data rather than simply repeating it. Subsequently, to reduce confusion “**IOT Gateways/Base-stations**” may be a preferable catch-all for such devices.

The Solar/Battery IOT platform produced by AGWAN can be utilized as both a sensor or as a controller. In the case of water pressure monitoring or electric fence monitoring, the device would work as a sensor, however in the case of a solenoid valve, the same platform (with slightly modified hardware) is used as a controller. A similar situation occurs with the irrigator monitor and pump monitor, which both have limited control capabilities also. Subsequently, “**sensors/controllers**” may be a more appropriate term, or simply “**IOT nodes**”. Current offerings from AGWAN may be found in the following link:

<https://www.agwan.com.au/shop-products>



## Is 50% an appropriate rebate level?

We are of the belief that a 50% rebate is more than adequate to rapidly accelerate the adoption of such technology in the agricultural sector, however the fear exists that with a 50% rebate there may be a raft of fly-by-night companies that try to push into the industry and dump imported IOT products into the sector without a long-term plan to support them, leaving farmers with stranded assets.

## Is there a better way for the Program to be implemented?

- Many of AGWAN's products have been designed, tested, and manufactured in Australia, with local circuit board assembly and all final assembly occurring in Australia. In the interest of supporting a local electronics manufacturing sector, it is requested that the 50% rebate only applies to Australian Made products, with a 20% rebate for all other products.
- With the fear of having foreign irrigation companies swallow the entire program budget by getting farmers to replace existing irrigation panels on pivot irrigators with new remote monitoring units costing approximately \$5,000 each, it is proposed that there be a price cap of \$2,000 per device cap or some similar mechanism to be put in place to limit such rollout. In addition to the high drain on the program budget, such foreign controllers tie the farmers to subscription costs of almost \$1,000 per irrigator per year, and result in significant waste rather than just upgrading the existing control panel for remote operation with an AGWAN IOT device.

## Question 1: Would you be interested in applying to be an eligible equipment service provider?

Yes, AGWAN as an established manufacturer and installer of agricultural connectivity products would like to apply for such eligibility.

Our registered business address is:

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MUDGEERABA QLD 4213

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PO Box 269  
Longford, TAS, 7301  
ABN: 70 639 121 681



Ph: +61 (0)3 5294 0829  
info@agwan.com.au

## Question 2: Do you have any comments or questions about proposed eligibility requirements for equipment service providers?

Given that AGWAN's operation and manufacturing base is located in Tasmania and there is increasing demand for our products on Mainland Australia, AGWAN would likely be looking to expand through partnerships with existing interstate agricultural service providers. In light of this, organizations who currently sell or service farm equipment (typically local electrical or irrigation firms) but do not currently sell IOT devices will become distributors for AGWAN, as there are few suppliers in regional Australia who can justify specializing in just agricultural IOT. These organizations will be able to "demonstrate a track record of delivering workable solutions to Australian Primary Producers", but they will have minimal experience to date with on-farm-connectivity devices.

## Question 3: What would hinder you from participating as an eligible equipment service provider?

Although AGWAN has been a registered company since July 2020, the income from sales has to date been transacted through Energy ROI Pty Ltd, an energy consultancy firm from which AGWAN was born. This is because during the startup phase of AGWAN, the R&D costs have been funded from the Energy ROI balance sheet, and the actual income from AGWAN has been limited to date, so any minimum turnover requirements will be difficult to immediately satisfy. With a suite of product offerings now available, AGWAN will be moving forward under its own balance sheet.

## Question 4: What is the most popular and relevant connectivity product your business provides to farming, fisheries or forestry businesses?

Pivot irrigator monitoring and control IOT devices.

<https://www.agwan.com.au/product-page/pivot-irrigator-monitor>



### Question 5: Do you have any concerns regarding sourcing connectivity products? Are there any supply chain issues currently affecting your business?

The current chip shortage means that there is approximately a 5-month delay between large volume orders and delivery dates. We have also had to re-design our equipment, as some of the chips we were using had a 24 month lead time. We hold enough stock currently so that typical orders can be serviced immediately, however a significant order would require further production runs.

### Question 6: Do you have any suggestions on how the Program can be improved?

Not apart from the suggestions already outlined above, a summary of which is as follows:

- 50% rebate only for Australian Made products, 20% rebate for all other products.
- \$2,000 device price cap.

### Question 7: Please provide any other information that you think would assist the Department in designing this Program.

You are welcome to contact us directly if any clarification is required on regarding the information and suggestions provided above:

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