



Date 05/01/21

Ms Kami Kaur

General Manager, A/g

Australian Energy Regulator

GPO Box 520

Melbourne VIC 3001

via email: VIC2021-26@aer.gov.au

Response to Powercor Revised Proposal 2021-2026: Request to upgrade Tyrendarra, Strathdownie Cape Bridgewater and Gorae West to three-phase power

Dear Kami,

I am the Principal/CEO of Keemin, a Victorian-based company established in 1984 which specialises in energy management for small to medium-sized businesses and homes throughout Victoria. We have been engaged by [REDACTED] to provide an integrated energy solution that prioritises sustainability and future business development. With [REDACTED] permission I share with you the ambitious vision we have developed for [REDACTED] to build a sustainability-led business and market themselves as **The Green Dairy Farmer**.

Our business plan focuses on three key objectives, to:

- Reduce energy costs
- Create growth opportunities
- Facilitate the opportunity for future diversification into boutique lines

The proposal we have with [REDACTED] at present is in short form as per the following.

Stage 01

- Supply upgrade in the vicinity of up to 500 kVA. This is from the grid at three phase
- Installation of 100 kW of renewable energy in the form of PV
- Retention of the existing 200 kVA on site generators
- Introduction of thermal storage in the form of chilled water

Stage 02

Expand the facility to consider the following future subsidiary lines

- On site bottled full cream milk
- Organically produced milk in bottled or bulk form.

Stage 03

On site produced organic products such as

- Boutique Cheeses
- In House speciality Yoghurts
- Large on ground PV system

Implementation Plan

Stage 01

- Post the three phase upgrade connect to a spot price retail arrangement
- Installation of 100 kW of PV
- Design and install a thermal storage vessel. This vessel will hold enough pre chilled water to facilitate milk entering the vat at or about 6degrees. This thermal storage device will be created using the 100 kW PV system to chill the milk during daylight hours.
- The power purchase agreement will include an ability to return to the grid in excess of 400 kVA of energy. This will be initiated when the spot price for energy makes it cost effective to sell back to the grid. This will happen continually with excess power from the 100 kW PV system and by pricing to export power from the two existing 200 kVA generator sets.
- This facility has the ability to provide the grid with up to around 400kW **demand response** energy
- It is accepted that this proposal would struggle to be financially viable if the equipment were to be sourced primarily for this function. We have in this case the equipment already in situ. It is a matter of utilisation of existing assets.

This **demand response** capability will be able upon request supply around 400 kW of additional supply capacity to the grid. This can be facilitated upon request or when the spot price makes it financially viable.

As the farm becomes more viable it opens the opportunity for additional investment in the form of Stages 2 & 3. These stages are very labour intensive providing greater employment opportunities to rural people.

The energy management component is clearly viable due to the pre-existence of the generation capacity.



The future stages 2 & 3 are dependent upon the implementation of stage 1.

We thank you for the opportunity to prepare this submission.

Please feel free to contact me if you seek any further advice

Yours Sincerely

John Cutler