



# Nikep Dairy Farm

energy  
**renaissance**



## Battery powered milk delivers positive returns for family farm

Fourth generation farmers John and Rochelle's Nikep Dairy Farm is a 450 hectare property in Simpson, Victoria. Running 950 head of cows, the farm had relied on grid electricity and diesel generators to power its operations. The recipient of a grant as part of the Victorian State Governments, Business Recovery Energy Efficiency Fund - a program to increase energy productivity and reduce energy costs for Victorian large energy users, with a focus on industrial energy users.

## The Journey

Dairy farmers are at the mercy of rising energy costs, grid instability and outages, highlighted during recent extreme weather events and floods. It is a requirement to milk twice a day everyday and with the dairy farm located at the end of a substation, the farm had an unreliable grid electricity supply that required them to have a backup diesel generator to power its operations, especially in the afternoons as high-power demands from around the farm's location meant it was most vulnerable to brown outs. A solar PV installation alone wouldn't allow them to unlock the potential of their renewable energy generation.

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The Victorian Government is leading the way with the On-Farm Action Plan program that grants farmers to invest in technologies to reduce their carbon emissions, including renewable energy. This will allow dairy farmers like the Pekin's to deliver a more economically and environmentally sustainable milk supply with a reduced carbon footprint.

**Nick d'Avoine, General Manager, Farming the Sky**

## The Solution

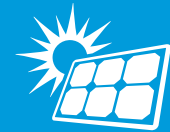
Agribusiness solar and storage integrator, Farming the Sky (Commpower Industrial), installed a 520kWh Renaissance superRack™ battery from Energy Renaissance with a 250kW rooftop solar system to store any excess energy generated. The new solar and battery system will reduce the Nikep Dairy Farm's reliance on grid electricity by up to 95 percent, and it is expected to decrease their energy and fuel bills by \$70,000 annually.



### Battery Storage

Utilising 4 x 99.84kWh superRack™ twin systems and cybersecure battery and energy management systems.

**Total of 399kWh**



### Solar Power

Equipped with 250kW of PV solar



### Additional Features

superEMS™ integration with existing grid protection relay for cost effective integration with existing infrastructure



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It became quite clear that we would forever be at the mercy of rising electricity costs that would impact on our profitability if we didn't make the transition to clean energy.

**John Pekin, Owner of Nikep Dairy Farm**



## Outcomes

Pending positive trial results, and when combined with his renewable energy conversions, Pekin says his farm's carbon neutrality could put him in a position to consider selling carbon credits and negotiating better milk prices with processors who reward low carbon producers.

It's also slashed his power bills, which had more than doubled from around \$30,000 to over \$70,000 in the space of five years, before solar and battery storage was installed.



**Generates 791MWh  
of energy annually**



**Saves 632,684 kg  
of CO<sub>2</sub> yearly\***



**The equivalent of enough  
energy to produce almost  
8000 mobile phones<sup>^</sup>**

The installed solution has seen the dairy farm received the Natural Resource and Sustainability Management Award from the Dairy Australia Great Southwest Dairy Awards.

\*Based on average 800 kg CO<sub>2</sub> emitted for each MWh of electricity generated from a black coal power station.  
<sup>^</sup>Based on an estimated 80kg of CO<sub>2</sub> emitted by a single mobile device during manufacturing and production.



For more  
information

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