

Virtual Energy Network

Shine On can now offer our clients a cutting-edge Virtual Energy Network (VEN). A fully integrated solar energy ecosystem which capitalises on all of your available roof space to significantly reduce costs and carbon emissions.

What is the Virtual Energy Network?

The VEN enables excess energy generated and/or stored from a solar system to be distributed to other sites or members of the network. The platform transforms the way in which energy is managed from the traditional site-by-site model, to a model which allows control over how energy is sourced, generated, stored and who it is distributed to - such as your other owned properties, staff, suppliers or tenants.

The VEN solution is realised through an Energy Management Unit (EMU) which provides detailed metering, monitoring and control to all included sites in your network.

How is it different?

The VEN has far greater capabilities and maximises its value over similar disruptive energy solutions such as Virtual Power Plants (VPPs) and microgrids. A key benefit being the live/real time trading to markets other than spot, where the obtainable arbitrage value is (usually) many multiples better.

The VEN also deliver all the benefits of standard VPP (and microgrids) without the retailer controlling process and pricing.

VEN benefits



More **renewable energy**



Stronger **stakeholder relationships**



Reduced **carbon emissions**



Greater **return on investment**



Futureproofs **solar investments**



Maximises **solar exports**

How does it work?



Site 1: solar generator

Excess energy is metered through the VEN for distribution to other participating sites.

Energy distributors

Greenlight the project and regulate the amount of energy that can be exported/sold to effectively manage the grid.

Commercial VEN sites

Excess energy from the solar generator is sold at competitive rates to other commercial participants in the VEN.

Residential VEN sites

Residential homes of employees, suppliers etc can be partially powered, at competitive rates by solar power generation from site 1.

VEN energy retailer partners

Standard retail billing processes are coordinated by VEN energy retailer partners.

The VEN allows both generators and recipients the opportunity to significantly reduce energy costs and emissions helping towards net zero emission targets and ESG reporting requirements. This provides a valuable revenue generating carbon abatement strategy.

How they compare

	VEN	VPP	Micro-grid
Sell your own energy at your own rate	✓	✗	✗
Maximise solar exports	✓	✗	✗
No integration costs	✓	✗	✗
Doesn't require batteries*	✓	✗	✗
Uncapped revenue opportunities from demand response, management and frequency control	✓	✗	✗

*The VEN doesn't require batteries, however it can integrate with other energy storage solutions.

Who does it benefit?

Any business that has a property with large roof space that can accommodate a solar power system. Businesses that would benefit include:

- Real estate property funds.
- Other funds/businesses that own multiple buildings.
- Businesses that operate out of multiple buildings (only one site has to be large enough).
- Businesses that operate out of one large building and the power consumption is not high.
- Local governments.
- Education facilities
- Manufacturers.
- Agricultural businesses..

The VEN process

System design

VEN solar systems are optimised to:

- Capitalise on all available roof space.
- Provide the best possible returns on your solar investment.
- Meet the financial and environmental goals of your business.

It is also possible to connect pre-existing systems to the VEN, greatly enhancing the benefit they offer.

Relationships with energy distributors

The VEN provides the opportunity to work in parallel with the existing energy distribution network, so they can effectively manage the grid.

Establishing a network

Once you have your 'solar power station' installed, we analyse and establish a comprehensive flexible network in which you can share the power generated across your own network at maximum value. Recipients can include:

- Other buildings in your portfolio - owner occupied
- Other buildings in your portfolio - tenanted
- Employees residential housing
- Community partners/charities
- Suppliers
- Friends and family

A special meter will be installed at the recipients properties which allows them to participate in the VEN.



The Energy Management Unit

The VEN uses cutting-edge hardware and software to create an intelligent Energy Management Unit (EMU).

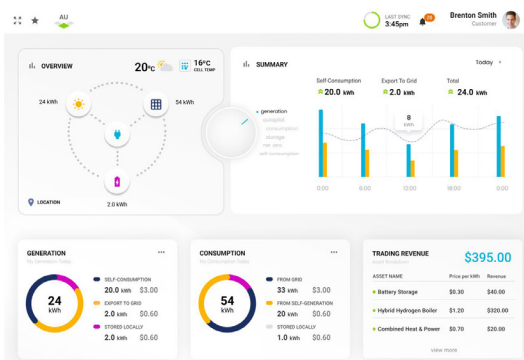
It provides energy generators with detailed behind-the-meter visibility of their energy use and trading potential with advanced control capability to act on these insights.

This includes the ability to:

- Optimise a sites energy usage to achieve a range of programmable outcomes.
- Optimise the energy trading to significantly increase ROI and reduce carbon emissions.
- Take control of individual non-essential loads to limit demand during peak periods.
- Set and change recipients and prices.
- Balance vehicle charging with other electricity needs to determine the best charging source, time and speed.
- Battery optimisation which allows users to charge their batteries from the grid when prices are low, or from solar when prices are high.

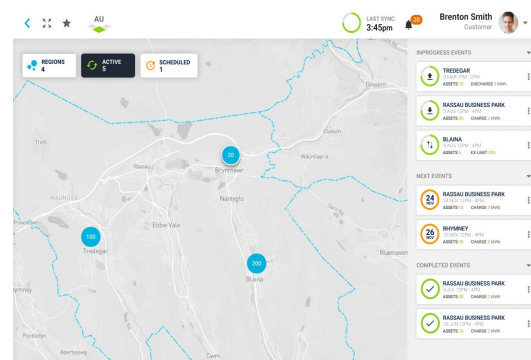
The centrally controlled energy eco-system allows users to monitor, remotely control and optimise how they use, store and trade energy, as shown in the dashboards below.

EMU example dashboards



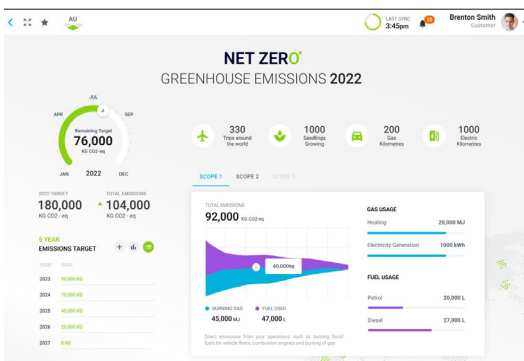
Customer Dashboard

An overview of solar generated, consumed and exported, as well as revenue from all sites.



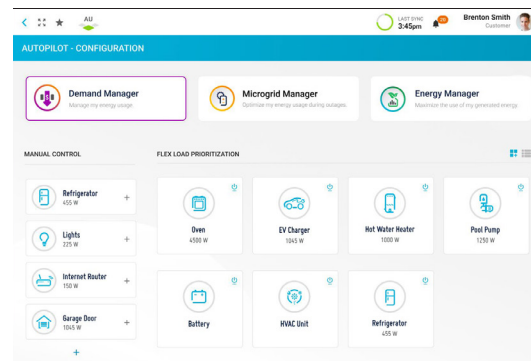
DERMS Dashboard

Tracks stored energy, production capacity and consumption trends.



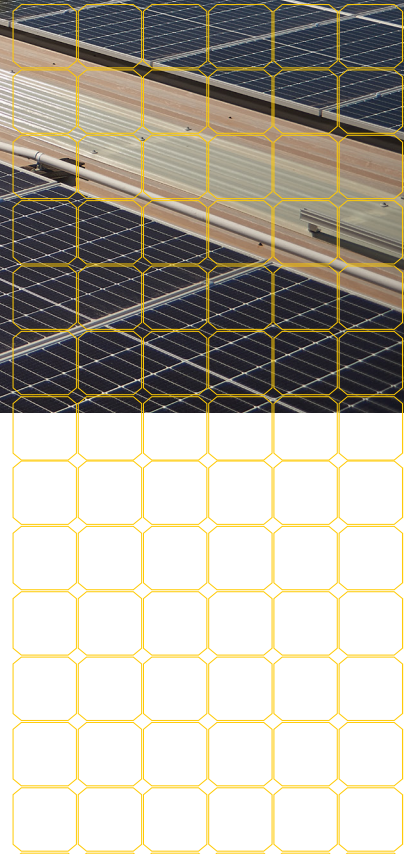
Net Zero Dashboard

Tracks your emissions against set targets.



Autopilot Dashboard

Integrates producing, consuming and storing devices onsite to build a dynamic energy map.



Contact us

For more information and a detailed proposal including:

- Financial benefits from the VEN versus a simple solar solution.
- Annual CO2 benefit.
- Payback period and return on investment.
- Contribution to your site's electricity needs.

K109, 63-85 Turner Street
Port Melbourne
Victoria 3207

Level 45, 680 George Street
Haymarket
NSW 2000

70 Fulcrum Street
Richlands
Queensland 4077

1300 013 648

info@shine-on.com.au

shine-on.com.au

shineon