The Role of Third Party Owned Distributed Energy Resources in Building an Efficient Grid

A solution for New Zealand's electricity future.

December 2, 2020

SOLARZERO

Our mission

Accelerate New Zealand's transition to be 100% renewable and lower the cost of energy for Kiwis.

100% RENEWABLE ENERGY

PROVIDE CHEAPER CLEANER ENERGY OPTIONS

REMOVE THE COST BARRIER

MAKE THE TECHNOLOGY SIMPLE

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The solarZero service

4500 + customers

4100+ with battery

400 solar only

OUR SERVICE

- Solar panels, battery system, advances energy monitoring and control platform (Hot water, EV's..)
- We own, manage and maintain the hardware – including battery swap
- Grid energy and e-store to drive energy efficiency

OUR VALUE

- Typical bill savings of 10-30%
- Back-up during outages
- Fix energy cost for 20 years
- Savings across term guaranteed

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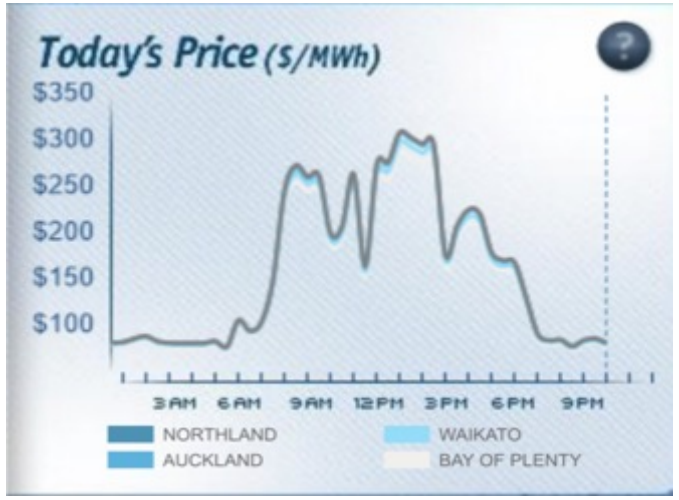
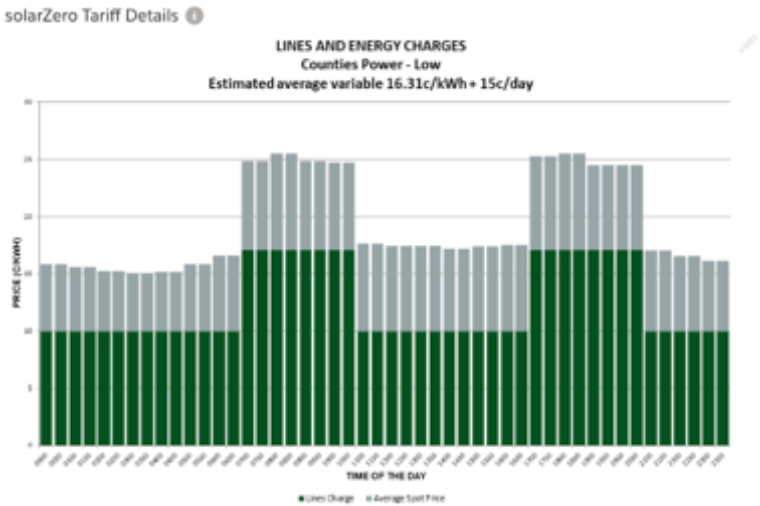
How do we save our customers money?

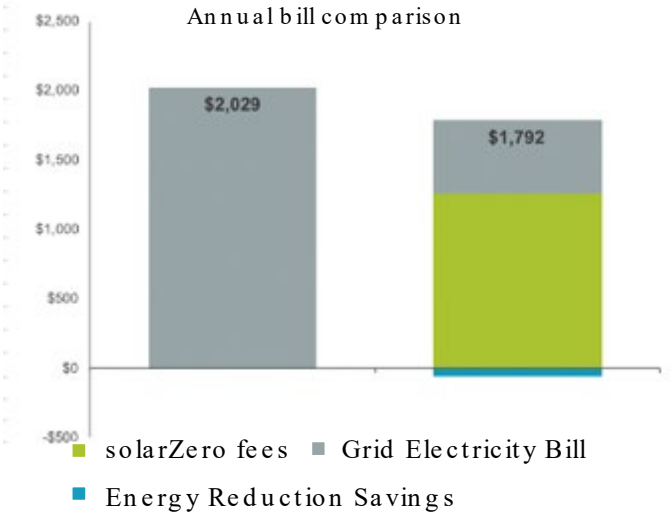




Outputs Location and Zoning	
Location	Auckland Central
Network	Vector (Auckland)

Recommended solarZero+ Battery Package			
Package	Size (kWp)	Area (m2)	Output (kWh/yr)
totara	2.655	15	3847

Energy Use Comparison



Estimated savings in the first year of **$230 or 12%**

Estimated savings over 20 years of **$17,500 or 31%**

- Avoided grid energy
- Price cap on net energy cost
- Time of Use line charges

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solarZero energy platform

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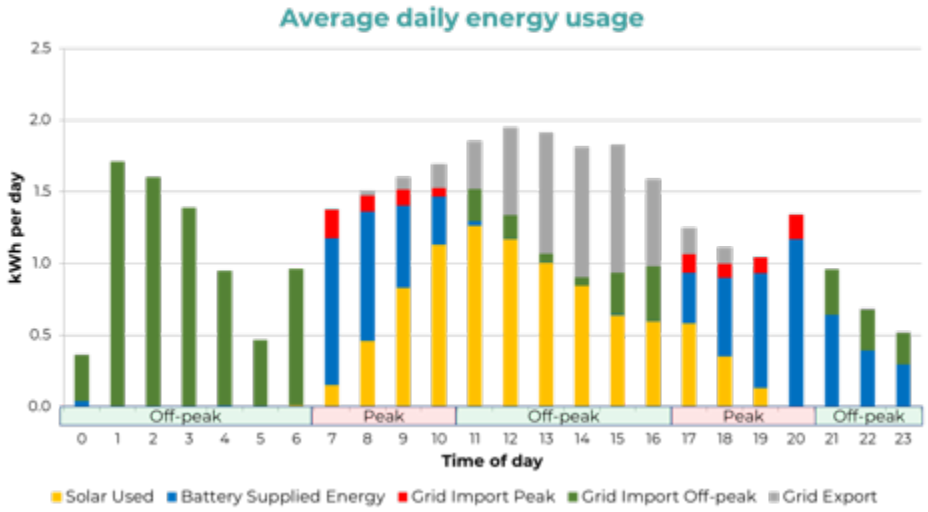
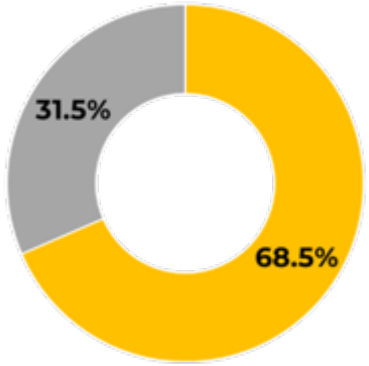
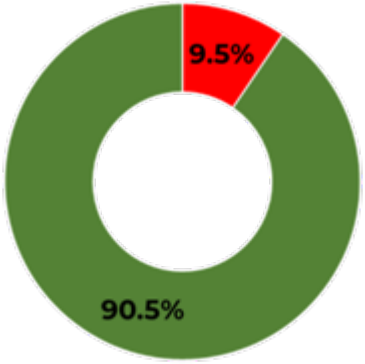
Results – A day in the life of a solarZero customer

Summer







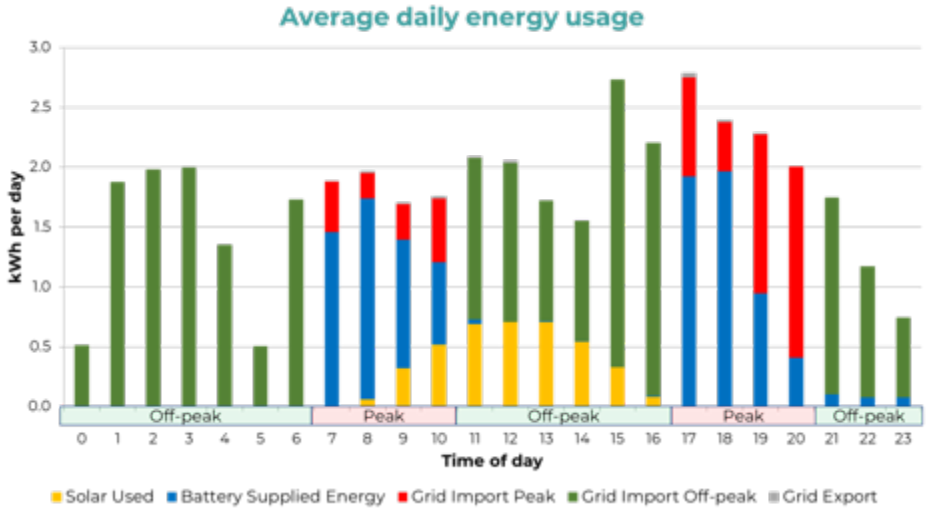
Total Solar Used

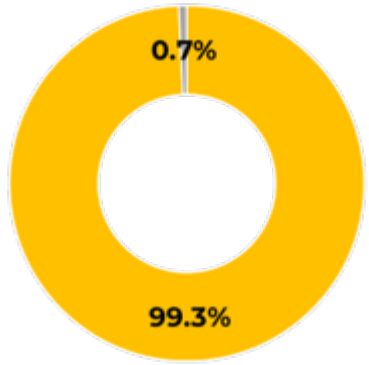
Grid Import Peak

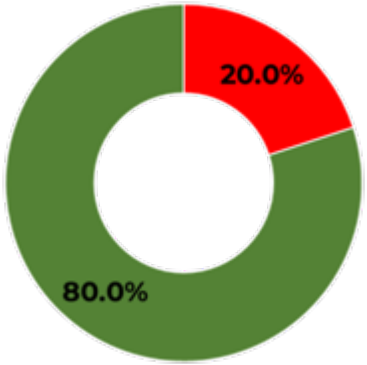
Total Solar Exported

Grid Import Off-peak

Winter







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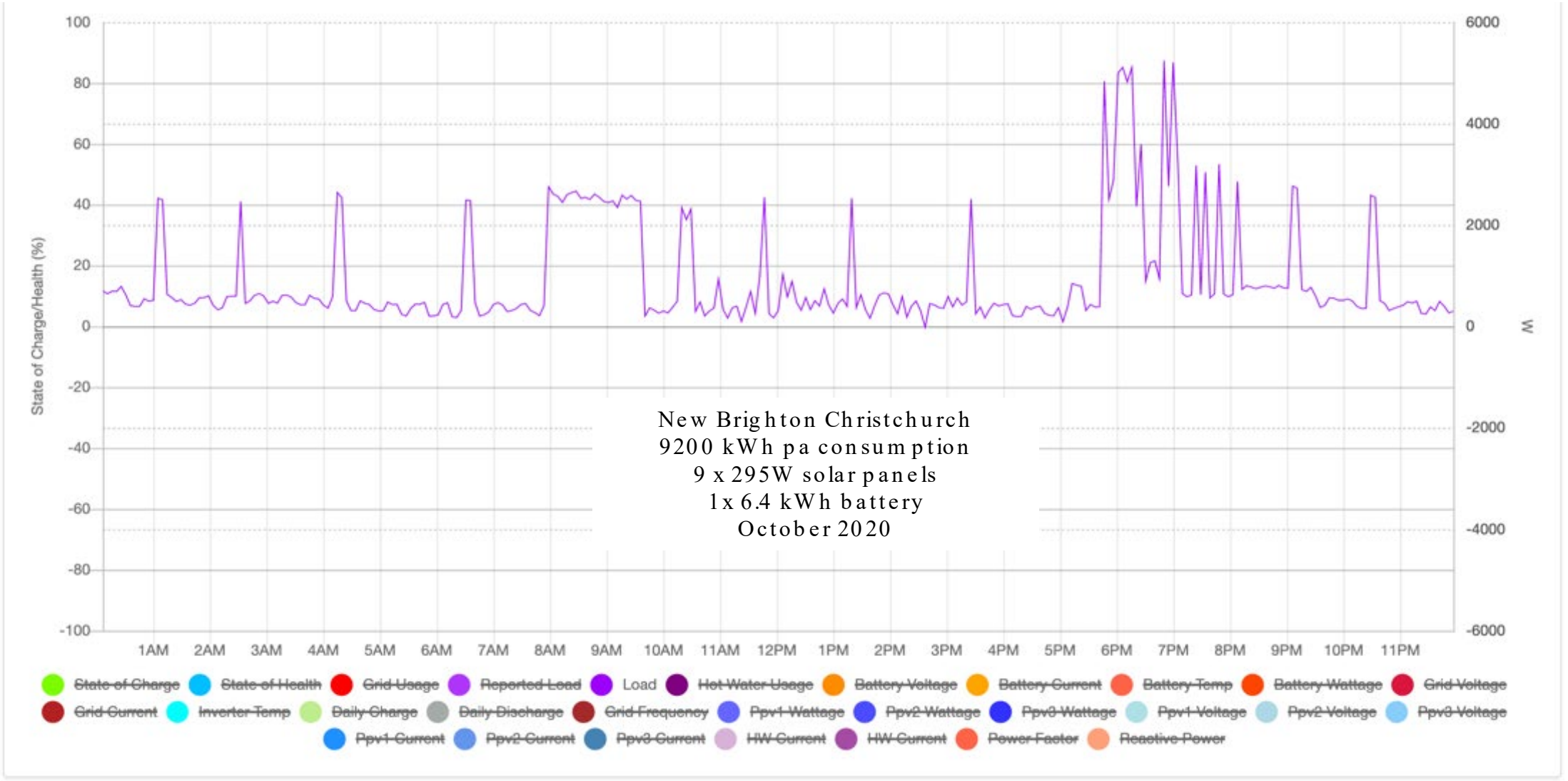
solarZero's effect on our customer's energy profile



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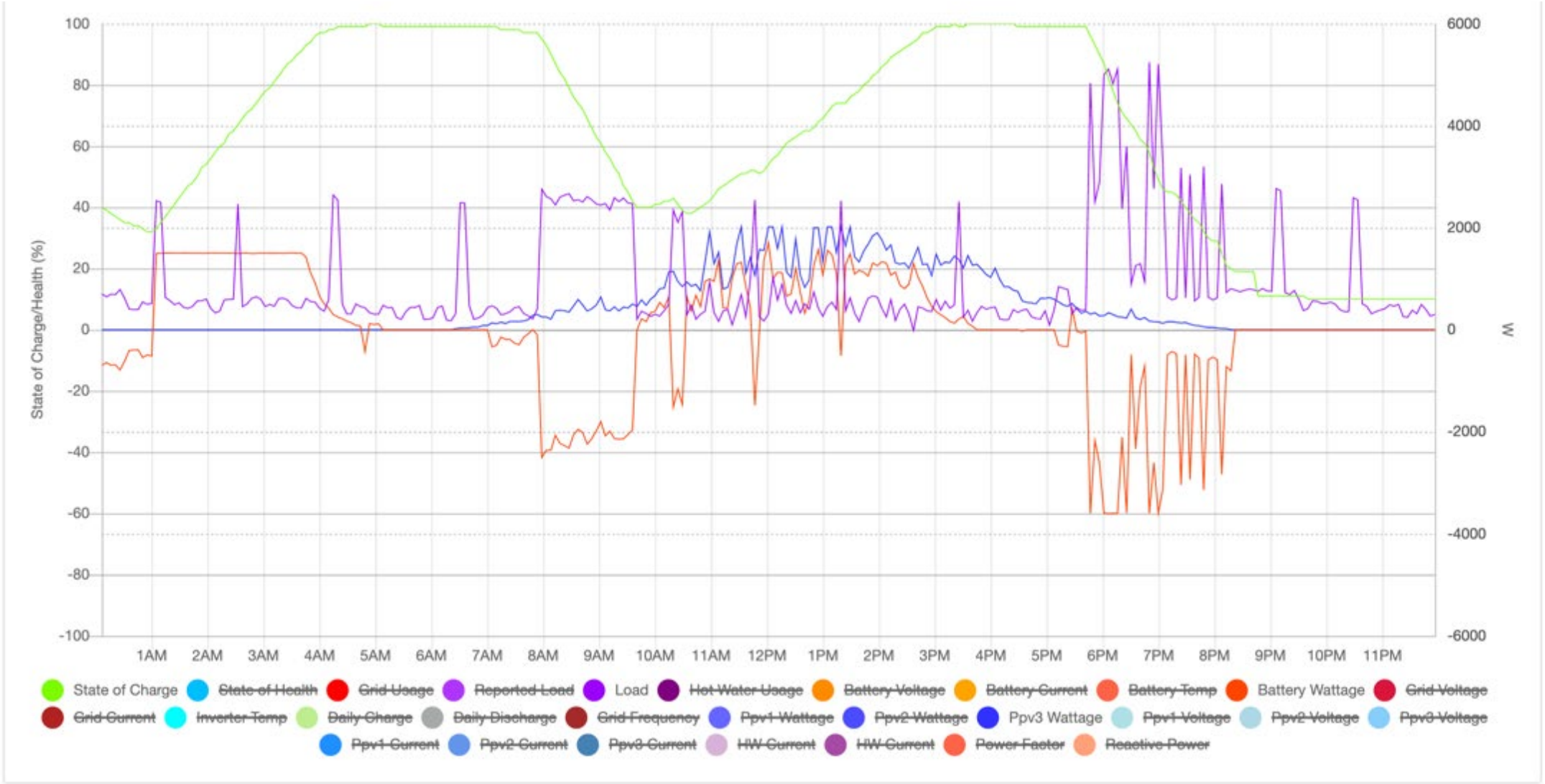

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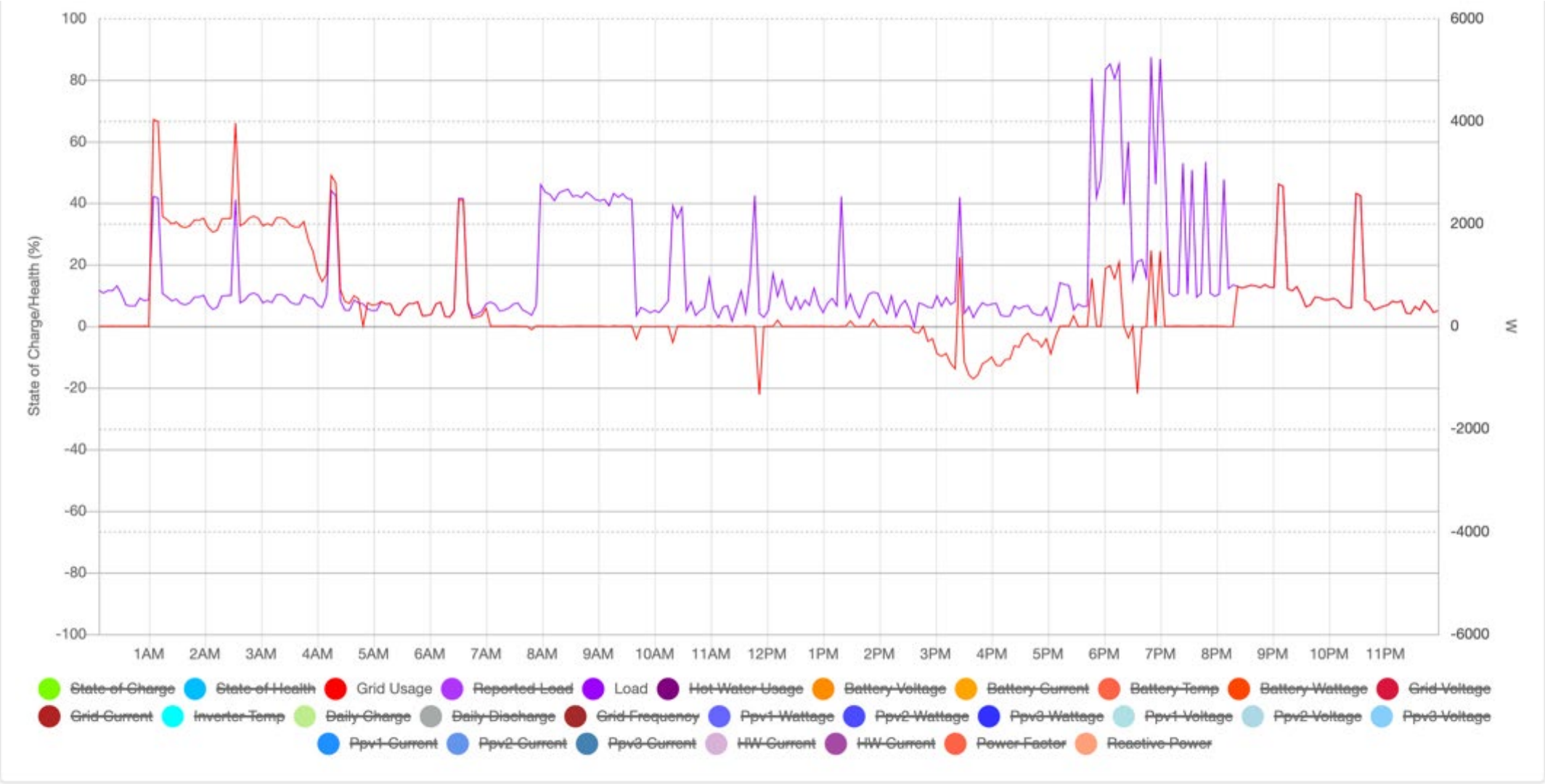
solarZero's effect on our customer's energy profile



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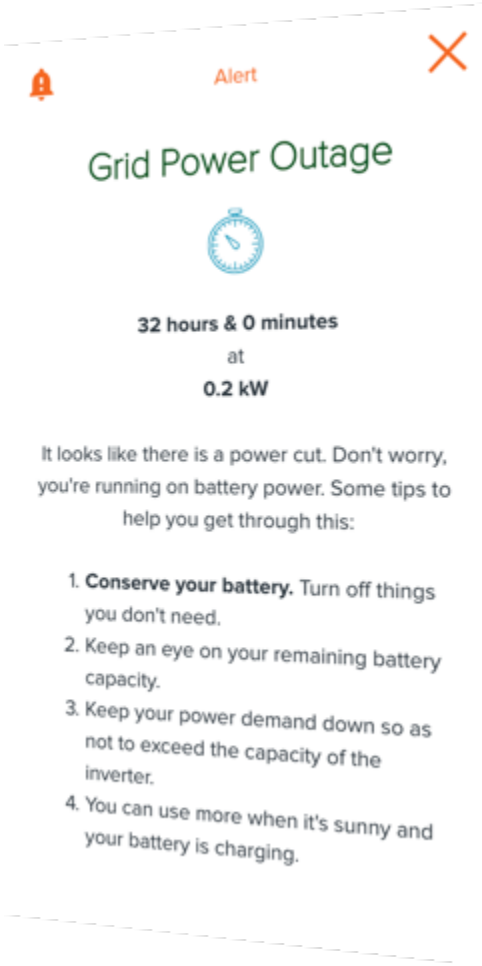
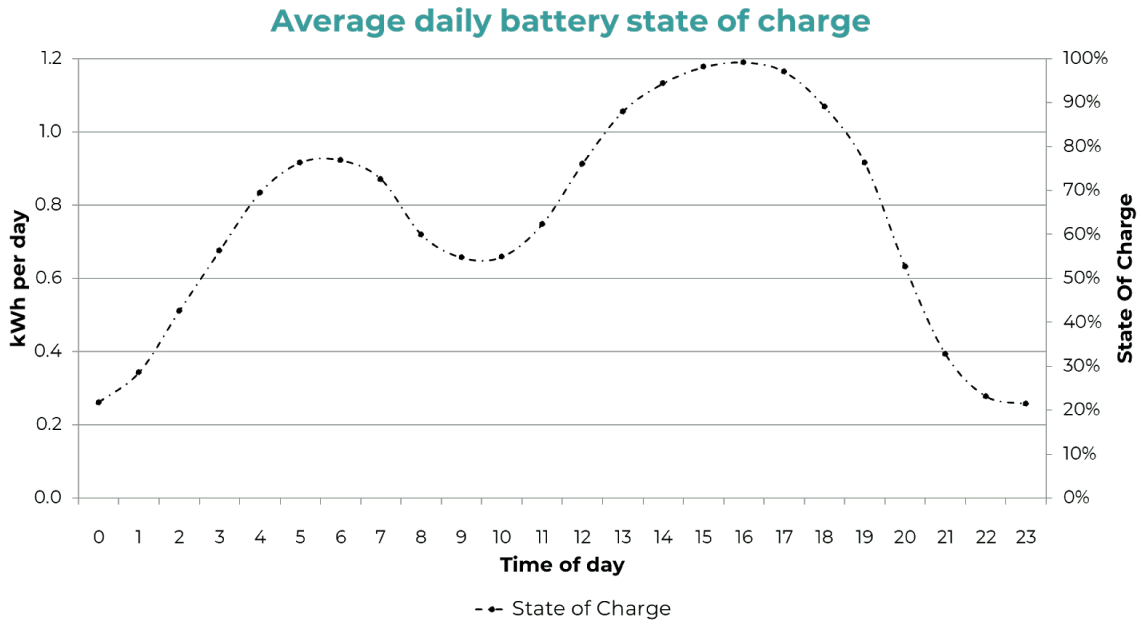
When the lights *(don't)* go out





"On Tuesday morning the power went off due to a tree further up the road. No big deal. Made little difference to us as the lights we needed worked along with our TV."
- Malcolm Langley

"Once more the power went out in our area last night but we continued to cook dinner, watch movies, make a cuppa. No disruption to our lives what so ever."
- Adrienne Wilde

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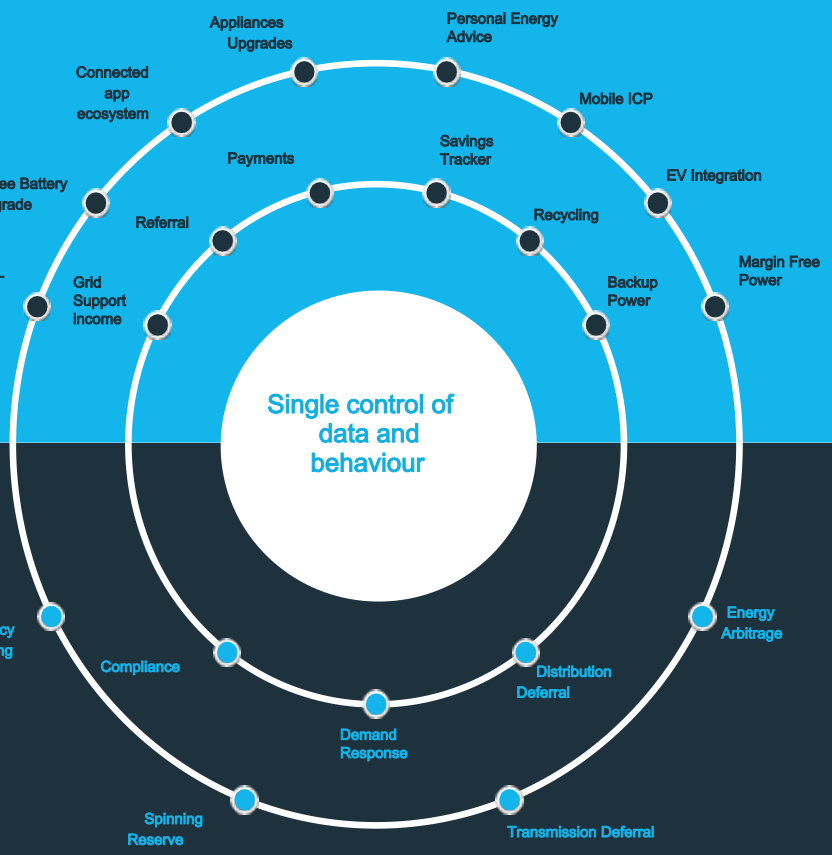
solarZero energy platform

solarZero Platform

Leveraging machine learning and artificial intelligence



For our community

Home owners and businesses can manage their day -to-day energy use with software that's smart and easy -to- use, having instant access and control of when and how they use power

For a Network Company

Real-time control system in the cloud making demand as controllable as a gas turbine by optimising any any smart device and control to support the grid

Growth drivers

- Drive to become 100% renewable for energy
- Rising Costs of conventional Power
- Doubling of demand with EV and gas/coal replacement
- Growth in IoT appliances
- Improving Economics of solar and battery storage

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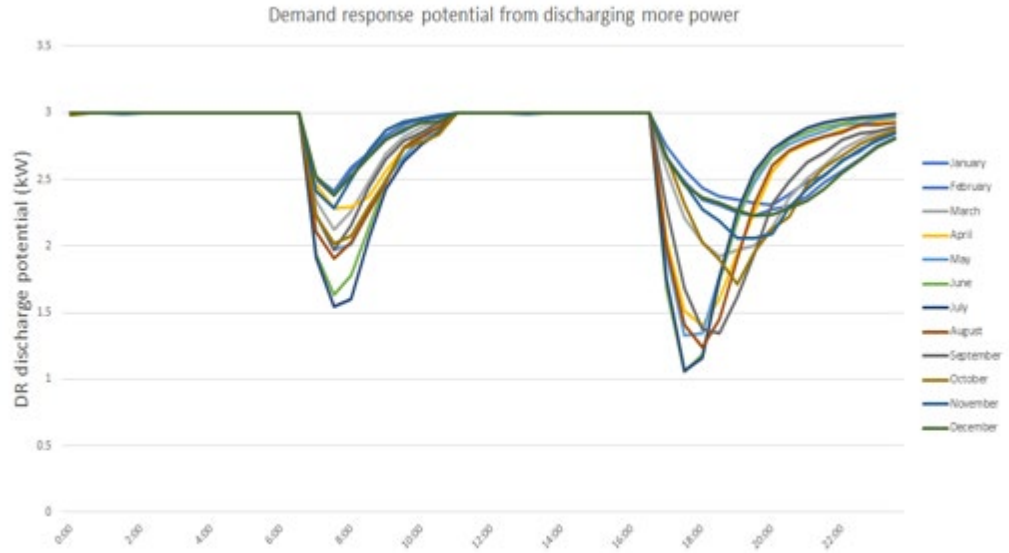
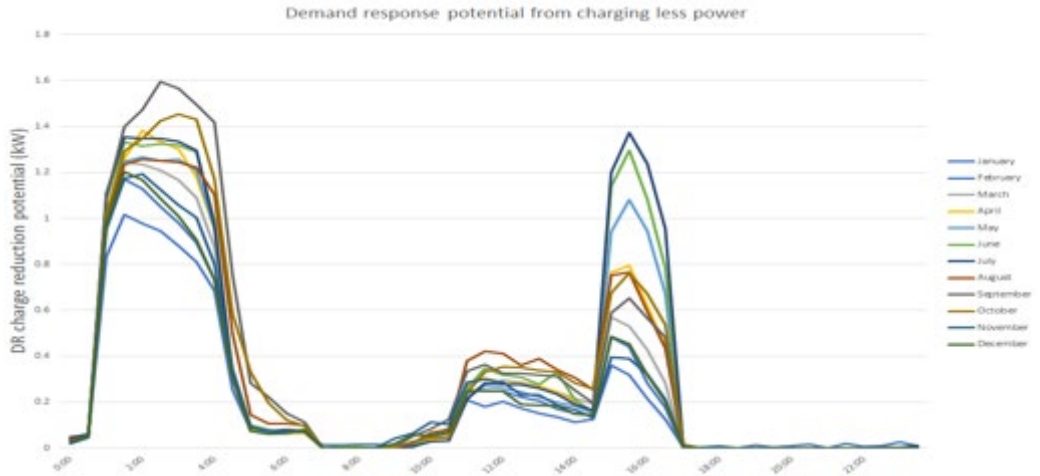
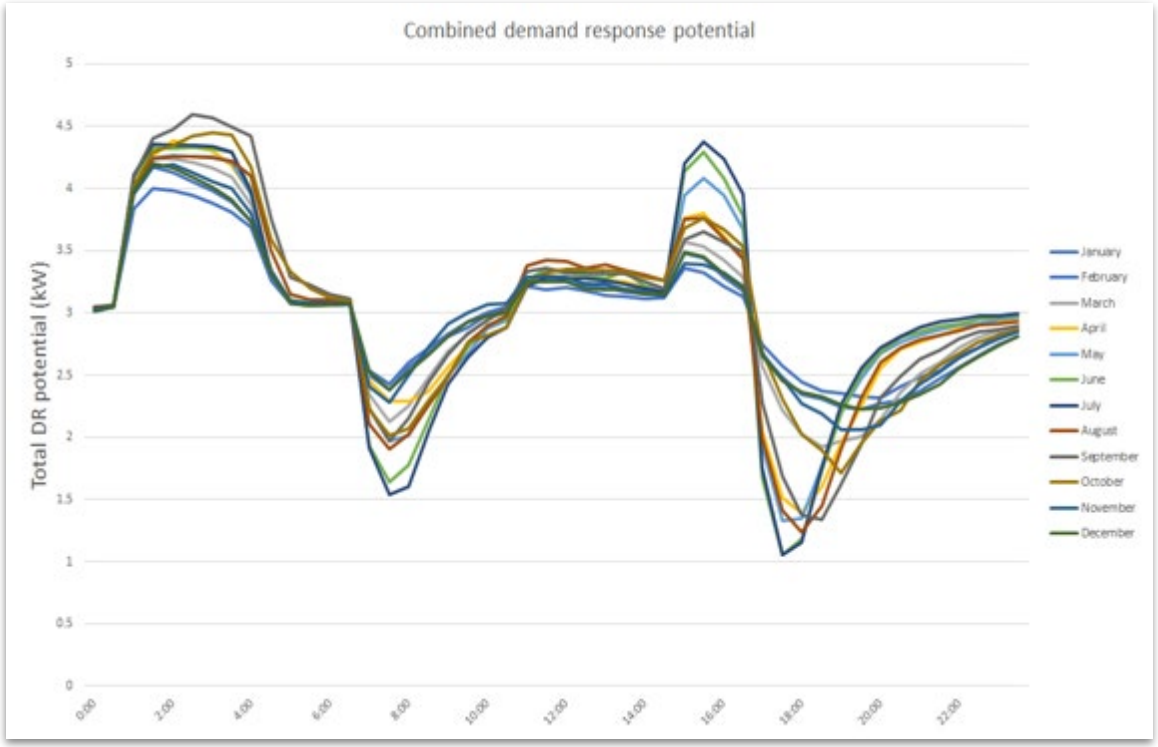
Demand Response







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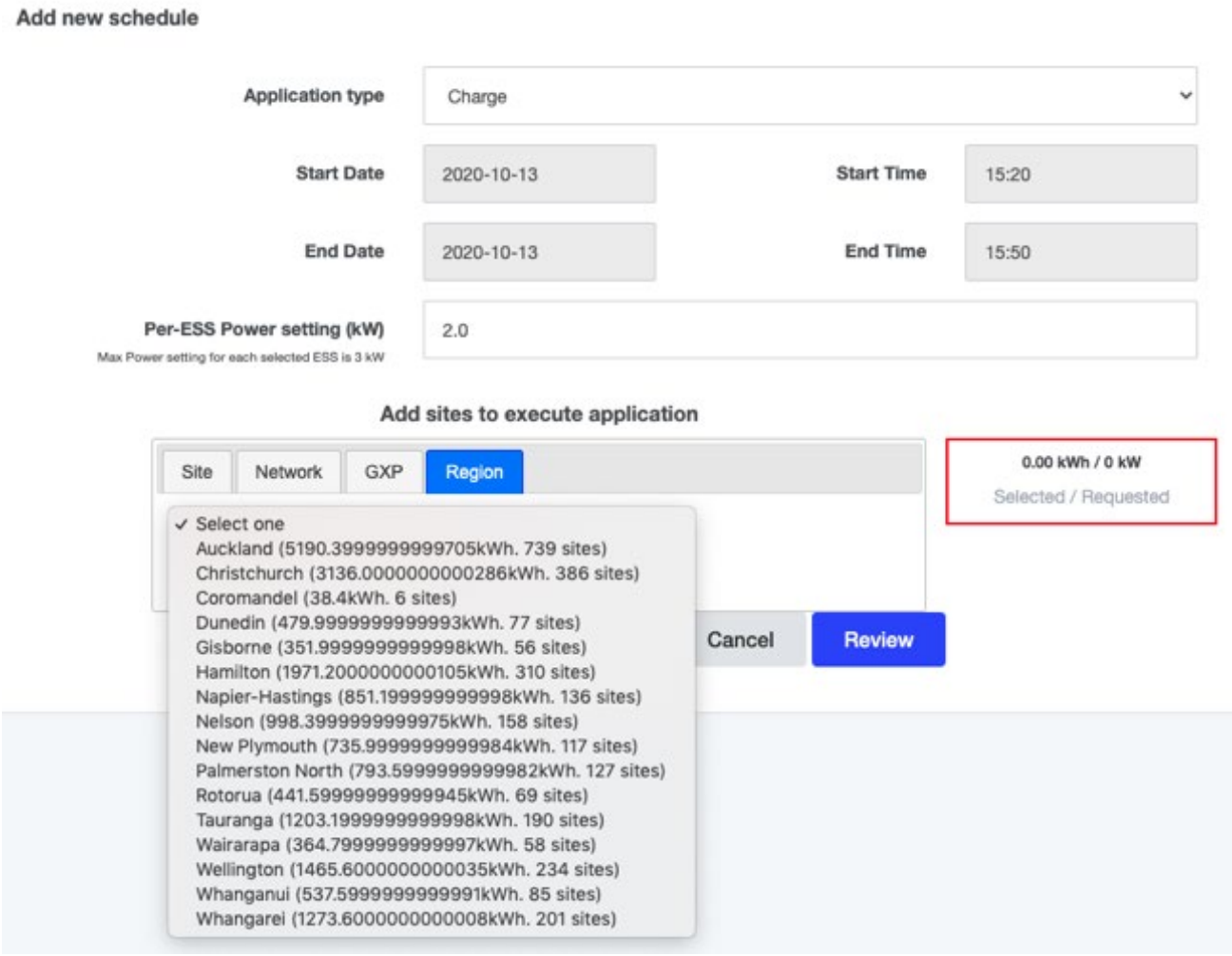

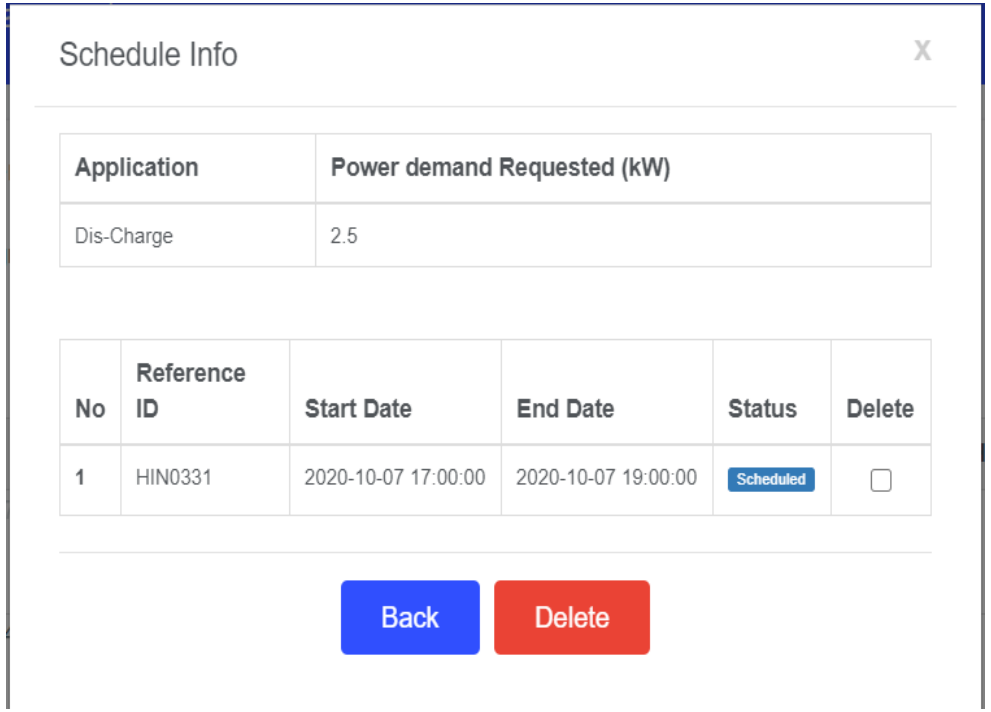

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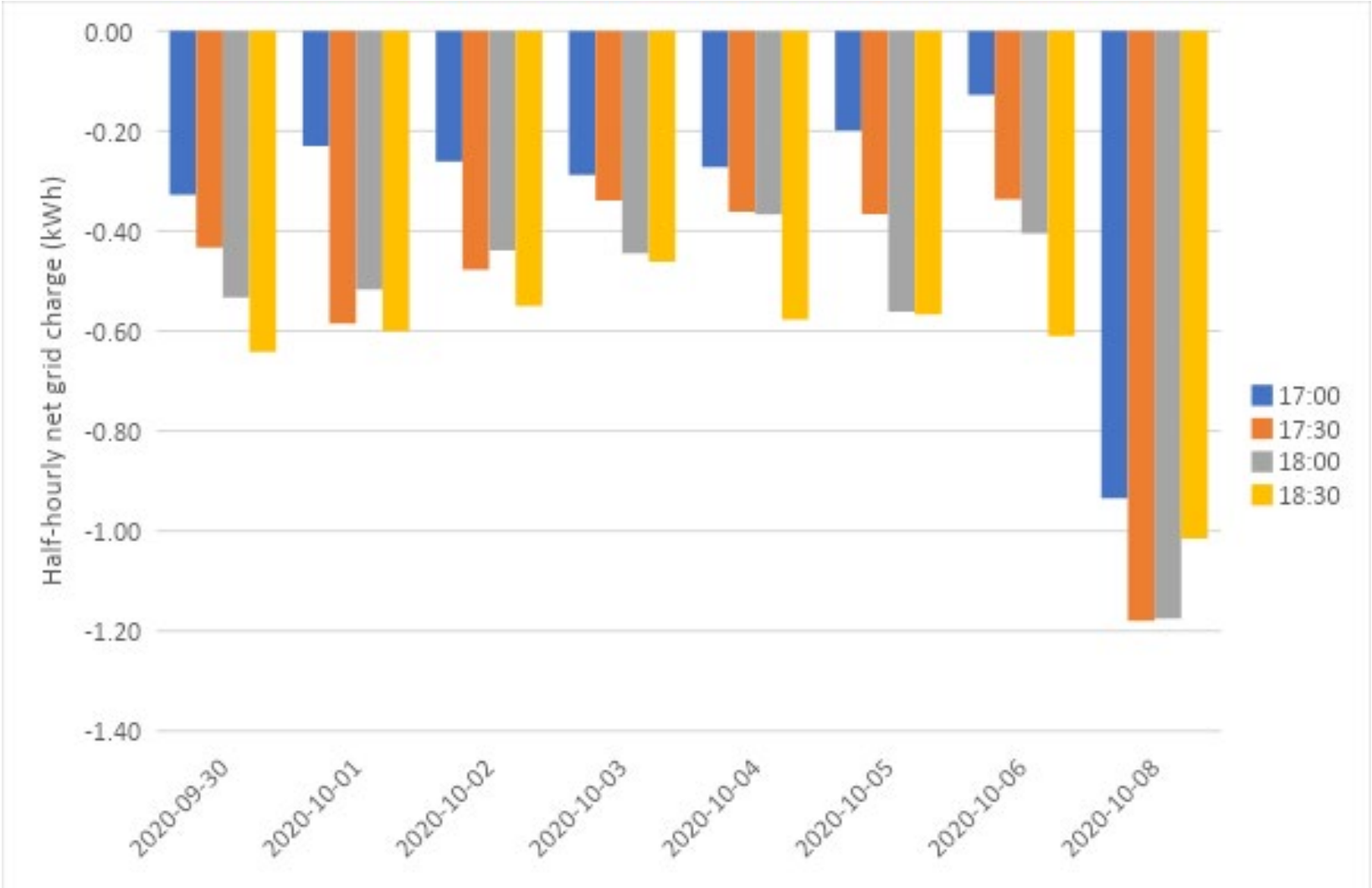
Demand Response – Real Event (Transpower)

Evening peak

No event pre-notice

Battery discharge on top of normal discharge offsetting load



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The Key Opportunities

- Targeted deployment of distributed battery storage to avoid or defer network investments.
- National and local demand response services
- Use of batteries in reserves markets (fast response)
- Other network services – frequency keeping, voltage support etc.
- Data – 5-minute load, solar, hot water load, voltage …

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Thank you

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