

System Customisation Made Possible with Versatile Technology

CHALLENGE

Customise PV system to accommodate tin roof and reduce daily energy consumption

SOLUTION

Enphase's flexible technology allowed for three rows of panels, maximising system performance

RESULT

Reduction of electric bill by 31 percent through production of 14,750kWh of clean energy per year



“A system should last 25 plus years, and I only work with products built to last.”

— Patrick Green
Director
SunPower Solar NZ

Best known for serving New Zealand’s famous green lipped mussels, The Mussel Pot is a small restaurant with big energy needs. With a new PV solar system, The Mussel Pot generates clean and free energy while kicking carbon emissions to the curb.

Adding Solar to the Menu

Over the past 20 years, The Mussel Pot has become an icon for Marlborough and the South Island, popular for its mussel-focused menu. All of the restaurant’s produce is sourced fresh and locally, using sustainable, free range and organic whenever possible.

Open daily, The Mussel Pot is highly conscious of its large energy consumption—using 46,821kWh of energy annually—but had little control over it. To offset usage, save money, and keep with its theme of sustainability, The Mussel Pot installed a solar system with intelligent monitoring capabilities for on-the-spot management. “With the rising cost of electricity and the fact that we are trying to do our small bit for the environment, we began investigating solar power,” said Tracy Cacciamani, owner of The Mussel Pot. “We had quotes from several companies, but were impressed with the quality of the products that SunPower Solar used.”



The Mussel Pot installation maximised all available roof space. (Right) Enlighten screen showing daily output in January 2015.

The addition of solar now covers 31 percent of The Mussel Pot's electricity bill and in combination with the included Sunpower Solar NZ energy audit is saving the restaurant a total energy cost of \$6325 annually.

Creating the Perfect Array

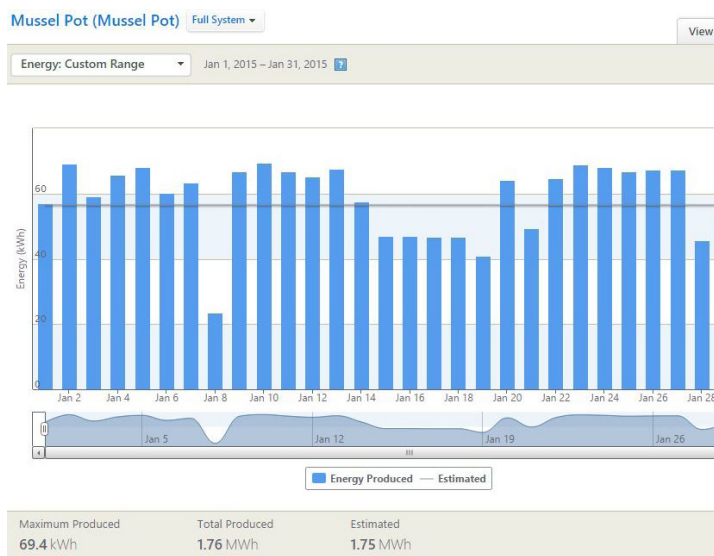
The freedom of Enphase's flexible microinverter technology enabled local PV installer SunPower Solar NZ to customise The Mussel Pot's system based on the building's unusual tin roof.

"SunPower Solar's unique mix of electrical and IT experience gives us a competitive edge in the smart solar industry," said Patrick Green, Director of SunPower Solar NZ. "We can confidently take Enphase technology to any installation site knowing it can handle just about any challenge."

Beneath the restaurant's tin roof lay a timber layer strong enough to support the system. After reinforcing the support beams, SunPower Solar NZ installed 40 Trina panels attached to Enphase microinverters separated into rows using three single-phase cables. SunPower Solar NZ decided to leave only small gaps between the rows to maximise the number of panels that would fit on the roof, ensuring optimal energy production.

Complete Monitoring

The Enphase Enlighten monitoring platform offers The Mussel Pot at-a-glance performance data, comparison to production in previous weeks or days, and system status indicator, which tells the restaurant if the system is performing as expected.



INSTALLATION SUMMARY

Client **The Mussel Pot**
Location **Havelock, NZ**
Installer **SunPower Solar NZ**
Completion Date **Nov. 2014**
System Size **10kW**
Microinverters **Enphase M215**
Modules **Trina Honey 250W**

Due to the system's specific design and the restricted access between panels, granular monitoring was essential in order to accurately diagnose and locate issues, if any arise. Enlighten enables remote performance diagnosis that gives The Mussel Pot insight into its solar PV system.

"We use Enphase microinverters for their versatility and compatibility with all roof types," said Patrick. "Safety, monitoring, quicker startup time, higher production; the Enphase advantages are endless."

"Our Enphase System has surpassed our expectations in production, and we love getting emails from Enlighten that tell how our system is reducing our carbon footprint," said Cacciamani.

About Enphase Energy

The Enphase System revolutionises solar power generation with industry-leading technology innovation. Enphase's proven microinverter technology maximises production of each module, which works together with advanced communications hardware and an intelligent software platform to deliver a reliable, high-performance solar array.

Learn more about Enphase System.
Visit enphase.com/au/commercial.

