When Stan Wilson’s dad built their family-owned and operated service station in the mid 1950s, he never anticipated today’s escalation of power prices. Now, Stan has a long-term plan to move away from grid-supplied electricity and is using Enphase Energy to make the solar switch.

Freedom from Power Prices
The Oasis Service Station in Tuncurry, NSW, operates from the early morning until late into the night each day, draining electricity along the way. With load spikes in the morning and at night, Stan turned to solar as a way to cut the station’s ever-rising expenses and hired Solar PV Commercial as his installer.

Solar PV Commercial, which began as a modest residential installer in 2001 then grew into an experienced commercial installer in NSW, came to the job knowing just what Stan needed—Enphase.
Safety First
When working with a petrol station to design a suitable solar solution, safety is the highest priority, and Stan needed a safe system with technology they could trust.

“The system is located on top of the 30 by 15 metre canopy, directly above the fuel dispensing facilities, with a 5,000 litre above-ground LPG gas tank close by. There is also large underground storage for the petroleum products, which have to be vented to the atmosphere,” said Stan Wilson. “I felt that standard single inverters posed a potential safety risk due to the high DC voltages being carried in the cables from the panels to the inverter. Then Solar PV recommended Enphase Microinverters, and I knew it was a much safer alternative.”

Typical string inverter systems can carry voltages of up to 600VDC down the cables to the inverters. The Enphase Microinverters receive extra low DC voltages of around 30VDC on a sunny day, with a maximum of 48VDC, from each single module. From the microinverter onwards, standard AC voltage is carried through the cables to the main switchboard, no different than other electrical components on site.

While string inverters increase safety risks by requiring high voltage DC cables to be run across the roof surface; Enphase Microinverters are designed with an all-AC approach to reduce voltage and require a lower level of external wiring and cabling insulation to further minimise hazardous safety risks.

INSTALLATION SUMMARY
Client Oasis Service Station
Location Tuncurry, NSW
Completion Date June 2014
Installer Solar PV Commercial
System Size 20kW
Microinverters Enphase M215
Modules Trina Solar 250W

About Enphase Energy
Enphase Energy 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.

To find how Enphase can help cut your energy bills and carbon footprint, visit enphase.com/au.