

Lodged by email to EPWA-submissions@deed.wa.gov.au

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To whom it may concern.

I write as owner and operator of a productive fruit orchard in Manjimup shire.

Fifteen years ago, approximately, we applied to upgrade the original 5kva single phase transformer supplying our farm. We were quoted \$62,500 for a 200 meter spur line, from the three phase line supplying our farm, and the smallest three phase transformer. That was then 10% of the value of the farm and the outlay could not be justified. We set up two new orchards on single phase pumps. Western Power did upgrade the single phase transformer from 5kva to 10 kva, as all the original 5kva fluid had long since leaked down the post. We were grateful for that.

We have had to develop a pumping system to utilise low power pumps running long hours. We have set up large tanks high in the orchards and utilise as much of the 3kW of solar power that Western Power allowed us to install about five years ago. We irrigate every night for seven months most years. We are on R1 tariff which is very suited to orchard irrigation at night. Night irrigation is very beneficial as at night there is less wind and low temperature which together reduce evaporation of water from the sprinklers. All irrigation water contains some salt and any evaporation concentrates that which is problematic for susceptible crops. We lift approximately 200,000 litres of water each day to replenish the tanks for the next night's irrigation. Because of the 3kW restriction on our solar installation we have set up two off grid stand alone solar pumping systems to boost supply. That has been very successful but more expensive than if we could have installed more grid connected solar. This summer we have budgeted for another off grid solar pumping system.

The system works. It is not expensive to operate but is more complex than the three phase system that I had initially planned. We have been plagued by both low and high voltage issues over the years leading to two pump motor burnouts and the failure of two soft starters. Recently we have had a voltage spike after a power outage that burned out our internet system. We applied for compensation from Western Power but were informed that though Western Power admitted it was their equipment that caused our loss they would pay no compensation as it was safety equipment. Strange argument indeed.

We now have many friends and family who drive EVs. As yet we do not own an EV but our next vehicle replacement certainly will be. To accomodate many visitors in EVs we have installed a Schneider EV smart charger. This charger is either three or single phase. In our situation it has been set up obviously on single phase. It is protected by a Schneider 32amp breaker. The problem our electrician emphasised is

that our Western Power supply is limited by their 32amp fuse in our meter box. This is standard practice for Western Power supply to single phase farm businesses he says. We have not used the new EV charger in the irrigation season with pumps operating but can certainly foresee problems ahead!

Will Western Power increase to power supply to farm businesses on single phase or will the businesses have to invest in very large battery systems and much more solar to charge the batteries? Will some version of Vehicle to Home or to Load become the way around the obvious conundrum? It is currently about the same price to buy an EV with the same capacity as a house battery without the car!

Thanks for your consideration of this power supply conundrum.

Doug Pow
Powbrook Pty Ltd