

Plug in: to Virtual Power Plants

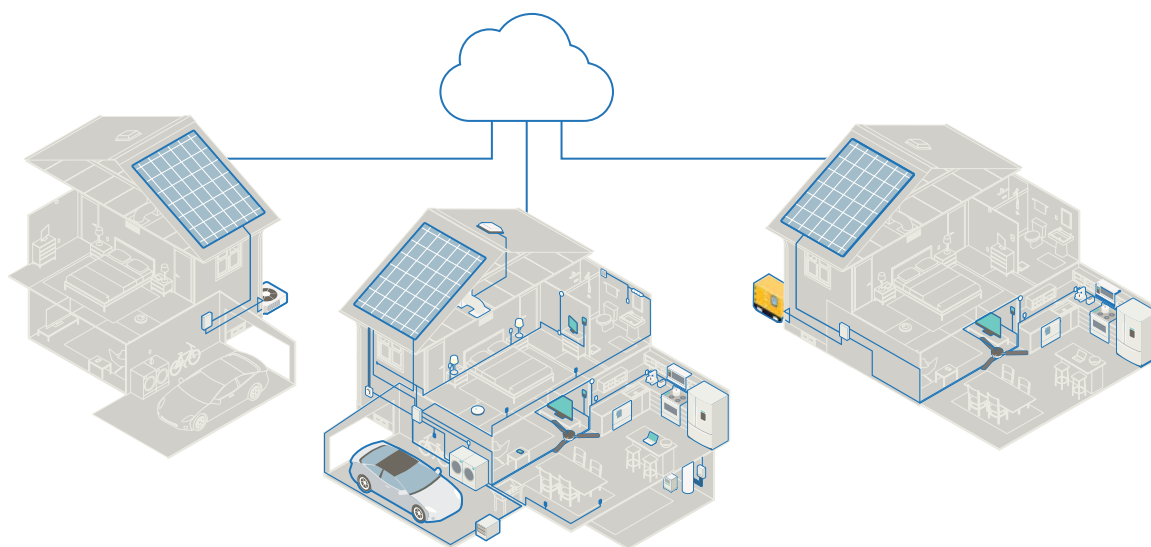
New energy technology has led to some new types of energy services that you may have heard of but not know much about. Here we give you the lowdown on Virtual Power Plants, a new offering that is growing in popularity.

1 Virtual Power Plants

What is a Virtual Power Plant?

A Virtual Power Plant (VPP) is a large number of small solar panel and battery systems installed at lots of different properties but operated as a group by an energy business.

VPP operators have agreements with large energy businesses like networks, power plants and the energy market operator, to use or produce certain amounts of electricity at times when it helps the energy system as a whole. They also have agreements with the owners of all the systems (usually houses, sometimes businesses) about how much and how often the VPP operator can use their solar or batteries, and what they will give the owner in payment.



New Energy Tech Approved Sellers are committed to meeting consumer protection standards on home batteries and new energy tech services. Look for the Approved Seller badge

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Why are Virtual Power Plants needed?

VPPs help to balance the energy system, and make sure we have enough energy when we need it. As old coal power generators close and are replaced by large wind and solar farms and rooftop solar systems, the electricity system is changing. This means that the way energy is produced, and the way that we use it, has changed. Sometimes the whole energy system produces more electricity than is needed (such as in the middle of a sunny day), while at other times demand is so high the system struggles to provide it.

VPPs can help to balance the system by providing extra, stored electricity when it's needed, or storing excess for later. They do this by charging up batteries, sending electricity from the batteries into the system, and even by shutting off solar systems at certain times if they are producing too much energy.

What's in it for me?

Earn or save money

VPPs use your energy equipment from time to time, and while they are doing so, you can't use it yourself. In return, they give you something. This might be a payment – a one-off payment, a fixed payment per month or year, or a payment each time they use your equipment. Or it might be a discount on the equipment they will be using – for example, a half-price battery with an agreement that they can use it a certain number of times per year.

Help reduce emissions

VPPs allow more rooftop solar and other, larger renewable power plants to be a bigger part of the electricity system. Without them, we might need more gas and coal power production. In this way, VPPs will help us to move toward a low-emissions renewables-based electricity system.

Support new solutions

VPP operators are using new technology to do new things in the energy system. They are still working out how best to balance the needs of households and the larger energy system, and how to make it a viable long-term business.

A key component of the federal Cheaper Home Battery Scheme is that, for a battery to be eligible to be rebate eligible under the scheme, it must be VPP capable. This is designed to encourage uptake of battery owners engaging with VPP programs and building additional capacity and flexibility into the power grid across Australia. This will allow consumers to get increased benefits from their home energy systems by enabling them to combine:

- Solar PV
- Battery Storage
- VPP Participation

to reduce their energy bills and contribute to Australia's transition to clean energy.



Understand your energy use and research your options to ensure you get a solar and battery system that meets your needs. Find out more at newenergytech.org.au

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Finding and choosing a VPP provider

When researching Virtual Power Plant (VPP) providers, it's essential to gather information to ensure it's a suitable fit for your needs.

Here are some key questions to ask:

- ☐ Who do they work with? Specifically, which energy retailer or network?
- ☐ What will you get for participating in the VPP? For example, a discount on solar or a battery? A once-off or ongoing credit/payment?
- ☐ How often and how much will they use your equipment? For example, they might say they will use your battery for up to a certain number of charge–discharge cycles per week or month.
- ☐ Will their usage affect the lifespan of your battery? If so, by how much?
- ☐ Does participation in the VPP void or compromise the batteries manufacturing warranty?
- ☐ Will you still be able to access feed in tariffs and government rebates?
- ☐ Can you choose to opt out temporarily? What does this mean for your benefits received for participation?
- ☐ Will they let you know in advance if they are going to use your system? If so, how?
- ☐ Is any special equipment required to participate, like a communication device?
- ☐ If you already have solar and a battery, can they estimate your potential loss of value due to their usage? How does this compare to how much you are being paid to let them use it?
- ☐ If getting a solar or a battery at a reduced cost is part of the VPP deal, can they estimate the value you will gain from it over ten years (accounting for the reduction due to their usage of it) so you can compare it with the cost you still have to pay to see if it's worth it? Research the type of solar system or battery to compare discount prices with regular prices.
- ☐ If interested, will they inform you about emissions saved through your participation?
- ☐ Do they offer an app or website to track your benefits, payments, and equipment usage?
- ☐ Is there easy access to customer support for questions or issues?

Make sure you have clear and satisfactory answers to these questions before signing a contract.



If an Approved Seller claims you will make a return on investment on a VPP, they will explain their calculations

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Sealing the deal

When you join a VPP there will be a contract or agreement to sign. This should spell out a number of the points listed above such as the type and maximum number and length of VPP events, how and how much you will be paid, and so on. It should also provide the details of any equipment that has to be installed to connect you to the VPP.

If you are getting a discounted battery or solar system as part of the arrangement, it should also say how much you need to pay and the payment terms, and details of the type of battery and/or solar system. Check out our solar and battery factsheets for more information about what you need to know about battery and solar systems, including warranties.

A good VPP provider will:

- Give you a contract that is clearly written and not full of technical jargon.
- Explain the contract to you and point out any specifics you should be aware of, such as:
 - details of any payments you need to make or that will be paid to you
 - anything you need to do to meet the contract terms
 - what you and they need to do to end the contract.

If your contract involves a purchase (for example, if you are getting solar or a battery for a discount price), there may be a few options for how to pay.

- You could pay up-front.
- Your state government might offer low or no-interest loans.
- You might redraw on your mortgage.
- The provider may offer finance so you pay in instalments.

Before accepting finance from your provider, ask:

- Is the total cost different if I accept financing?
- What is the interest payable?
- Are there any additional fees?
- Are there any payment terms or conditions that you must meet?
- Are there any additional fees you'll be charged if you fail to meet terms and conditions?



Approved Sellers are committed to providing clear VPP contracts with no hidden surprises

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A good VPP operator will have explained to you how and how often they will be using your solar or battery, and helped you understand the environmental and financial benefit you will get.

There should be a website or app you can use to see how it's going, and a way to contact them to ask questions. If your agreement allows you to 'opt out' for a time if there is a period for which you want to be in full control, they should have shown you how to do this.

You can be confident that by being a part of a VPP you're helping improve the energy system, reduce emissions, and save yourself money.



New Energy Tech Approved Sellers are committed to meeting consumer protection standards on solar, batteries and new energy tech



Designed by peak industry and consumer bodies

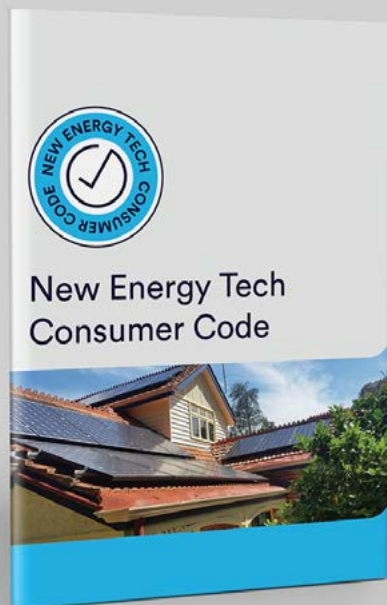


Authorised by the ACCC



Standards for the complete consumer journey

If you experience any problems with an Approved Seller, let us know at newenergytech.org.au/complaints



Find a retailer who meets consumer protection standards

New Energy Tech Approved Sellers are committed to meeting independent consumer protection standards designed by peak industry and consumer bodies and authorised by the ACCC.

The standards are designed to ensure customers get a fair and quality service when purchasing solar, battery storage, EV chargers or other new energy tech from Approved Sellers.



Sales and marketing

Honest, accurate, clear and fair sales practices. No pressure-selling.



Quotes & contracts

Clear, comprehensive quotes and contracts that meet customer needs with no hidden costs.



Delivery & installation

Services delivered safely on time and with clear information on activation and use.



Warranties & support

Complaints dealt with promptly, issues fixed and warranties honoured.



Find an Approved Seller at newenergytech.org.au or ask your retailer to show you their Approved Seller badge