

The Intellihub FLEX behind the meter platform

The Intellihub Flex program will become Australia's largest platform of controllable behind the meter devices, with more than 150,000 home energy devices delivering around 500 megawatts of flexible energy resources.

The platform will allow electricity retailers to manage consumer devices via a Virtual Power Plant (VPP) to soak up excess solar energy during the day and reduce power consumption during peak times.

It can help stabilise the electricity grid, reduce demand on wholesale power generation and allow electricity retailers to develop new innovative VPP based electricity products that reward consumers.

Analysis by Intellihub shows the platform could help reduce wholesale energy costs by around \$100 a year for every device enrolled in a VPP.

It integrates Intellihub's smart meter technology with the deX registration and control software.



Operators can use the platform to integrate their VPP with multiple device types and manufacturers through a single platform.

- It avoids the costly development of additional systems, and provides VPPs with a cost efficient and scalable pathway to device orchestration
- It's designed for Australian networks to reduce grid congestion and costly upgrades; and
- It connects customers as the owners of devices with market participants, unlocking financial opportunities

150,000 Consumer devices registered over the next two years:

- Residential solar energy systems
- Home battery energy storage
- Electric hot water storage
- Home EV charging
- Pool equipment

500 megawatts of flexible behind the meter load – bigger than Australia’s largest operating solar farm.

Solar energy systems

More than 3.4 million Australian homes now have rooftop solar energy systems. The average system size has climbed to around 9 kilowatts. This is predicted to grow to 6 million systems by 2030.

Battery energy storage systems

More than 180,000 Australian homes now have a battery energy storage system. The number of household battery units is expected to increase to more than one million by 2030.

Electric hot water storage systems

There are around 4 million electric hot water heaters in Australia. About 40 percent of all new hot water systems are electric storage.

Electric Vehicle home charging

Australian motorists are on course to buy around 100,000 electric vehicles in 2023 - representing about eight percent of all new car sales.

It’s estimated that there will be around 2.4 million EVs on Australian roads by 2030, supported by up to one million EV chargers.

The Australian Energy Market Operator estimates that about 80 % of EV charging will happen at home.

Swimming pool equipment

There are more than 1.3 million pool owners in Australia. Pools can be responsible for about 30 percent of household energy use.

Australian pools consume about 2.1 GW of electricity if they were all switched on at once.



HOW FLEX WORKS

The energy industry defines Distributed Energy Resources, or DER, as sources of electrical load or generation that are located behind the meter.

They're also called Consumer Energy Resources, reflecting the fact that many of these devices such as solar PV, hot water systems and electric vehicles are a customer owned resource and located on customer premises.

It's expected that there will be more than 10 million of these sorts of controllable devices in Australian homes by 2030. The Australian Energy Market Operator estimates that there will be a five-fold increase in these devices by 2050.

This creates an enormous opportunity for behind the meter services to support the energy transition and the country's 2030 and 2050 Net Zero Emissions targets.

The Intellihub smart meter, its communications platforms, and deX create

the ability for electricity retailers, networks or other VPP aggregators to manage these consumer energy devices, with the permission of energy consumers.

The devices become a resource which can be controlled to help manage demand for power.

The devices can be switched on or off via the smart controls, avoiding the need to curtail solar production during the day, or the need for more expensive non-renewable peaking generation when demand is high.

Collectively, a portfolio of these assets can be optimised to deliver real impact to help balance supply and demand.

Intellihub will be partnering with electricity retailers to enrol more than 150,000 consumer energy devices in the program over the next two years, creating Australia's largest behind the meter platform of VPP ready devices.

