

# Fact Sheet:

## Distributed Energy Resources (DER)

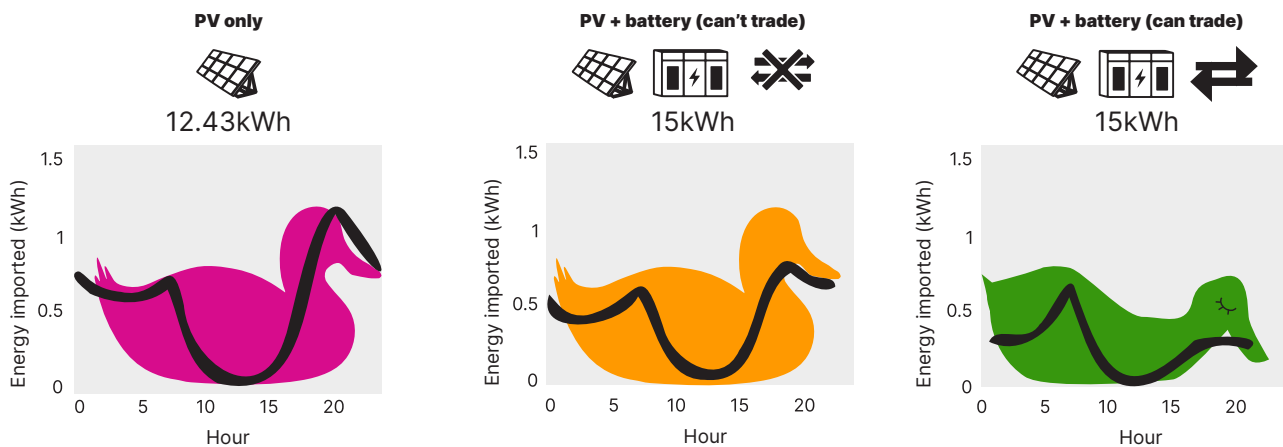
### Implementing DER at scale could lower costs for everyone

ITP Renewables modelled the impact of saturation DER on the electricity demand profile – what would happen if every compatible household has solar PV, batteries, flexible electricity loads such as electric vehicles, and other measures.

- This would flatten the electricity demand ‘duck curve’ - if solar PV is coupled with batteries that can freely trade within the surrounding suburb, it could decrease the evening peak by 67%-92%
- This would have significant impacts on the spot market, and could materially reduce prices for consumers through reduced wholesale prices and network costs
- Concerns about minimum demand management would also be eased
- Energy bodies should conduct further analysis of the impact of various DER uptakes and settings

### Import from wider grid

For the average household in the modelled suburb



Based on ITP Renewables modelling

A UTS study also showed that if all hot water systems are efficiently electrified and controllable by 2035, consumers could save up to an estimated \$6.7bn a year by 2040, creating 22GW/45GWh/day of flexible demand.

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# Capturing the benefits of DER requires policy and regulatory changes

## 1 Ensure appropriate technical standards are in place

- Create a body for the smart, timely development of technical standards



## 2 Increase solar exports

- Remove static constraints on existing solar by implementing Dynamic Operating Envelopes
- Improve voltage management



## 3 Unlock flexible demand

- Add flexibility requirements for major household appliances
- Accelerate efficient hot water electrification
- Enable residential demand response revenue streams



## 4 Fast-track distributed storage

- Prioritise and provide financial support for behind-the-meter (BTM) storage



## 5 Create a level playing field in network services

- Ensure distribution network revenue regulation enables DER integration

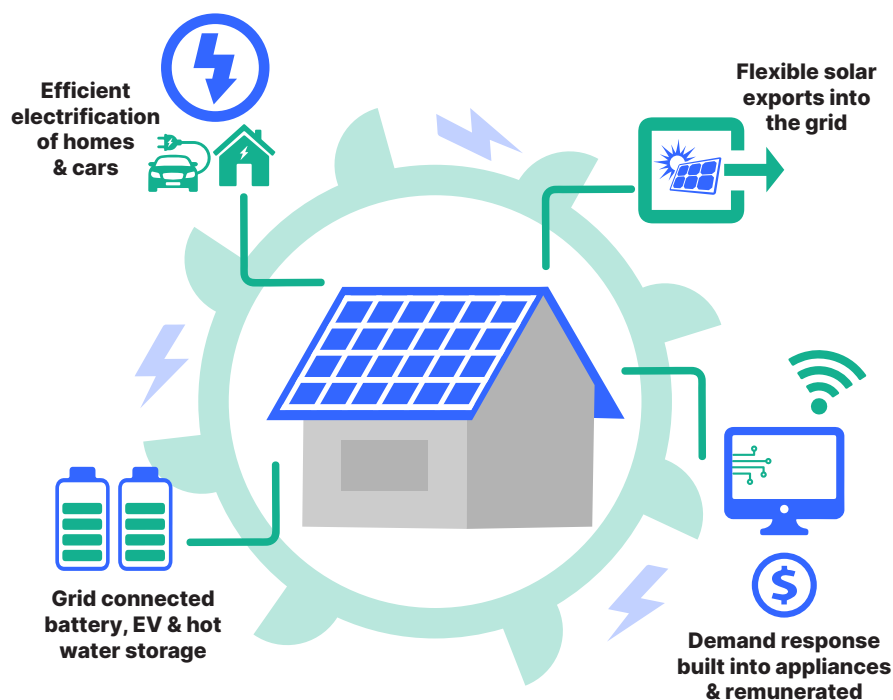


## 6 Ensure fit-for-purpose governance

- Ensure energy market institutions are enabled to support a DER-rich future



## Optimising DER means enabling a sharing energy economy



### Updates are required to governance & regulation to enable this:

- Dedicated DER authority for the development of technical standards
- Revised distribution network revenue regulation to enable DER to provide network services on a level playing field
- Review of energy market governance and its fitness for purpose for the energy transition

## About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

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