



Energy in  
action.®



# Energy markets in transition.

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AmCham



# Misconceptions about energy markets



Some of the reasons publicly given for the state of the market.

- > **Renewables** – concerns about unreliability.
- > **Gas** – view it's all being exported by multinational corporations.
- > **Coal** – desire to shut it down tomorrow.
- > **Privatisation** – belief that government would run the system better.

# The National Electricity Market

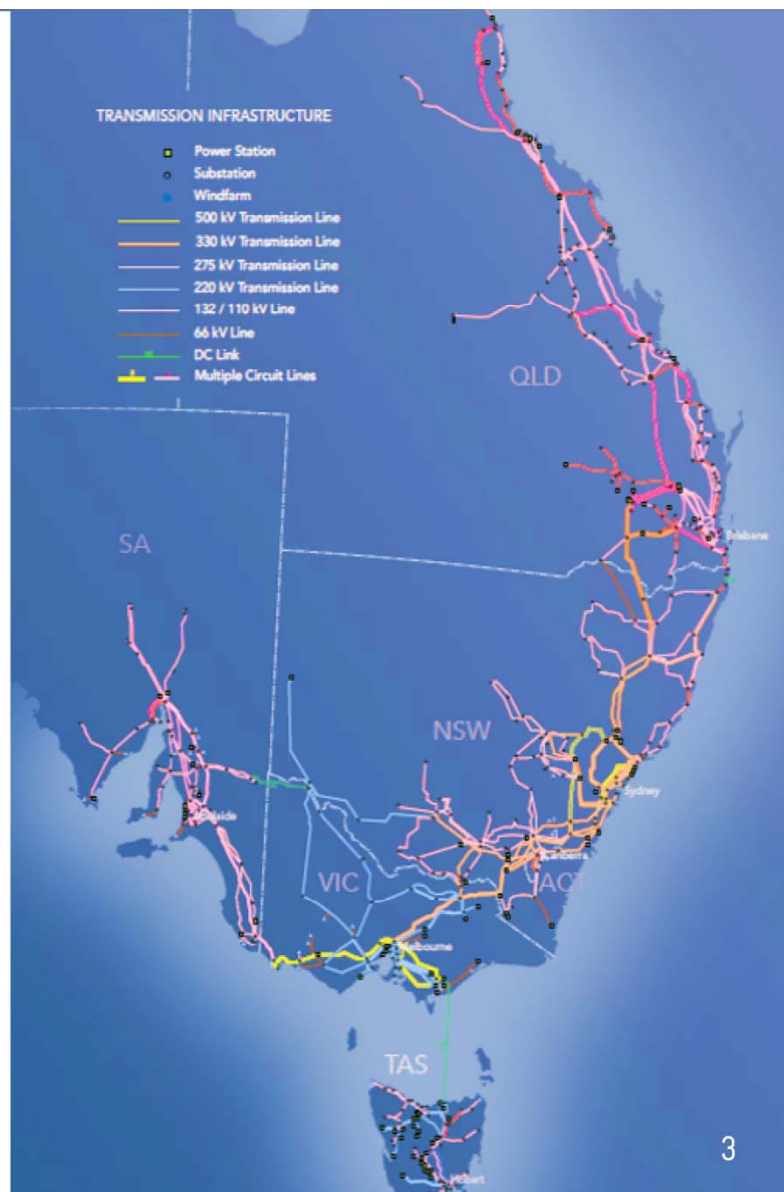
The National Electricity Market (NEM) supplies around **19 million** people.

Physically covers over **5,000 km**.

It is the longest alternative current system in the world.  
**40,000 km** of transmission lines and cables.

Supplying about **200 TWh** of energy to businesses and households each year.

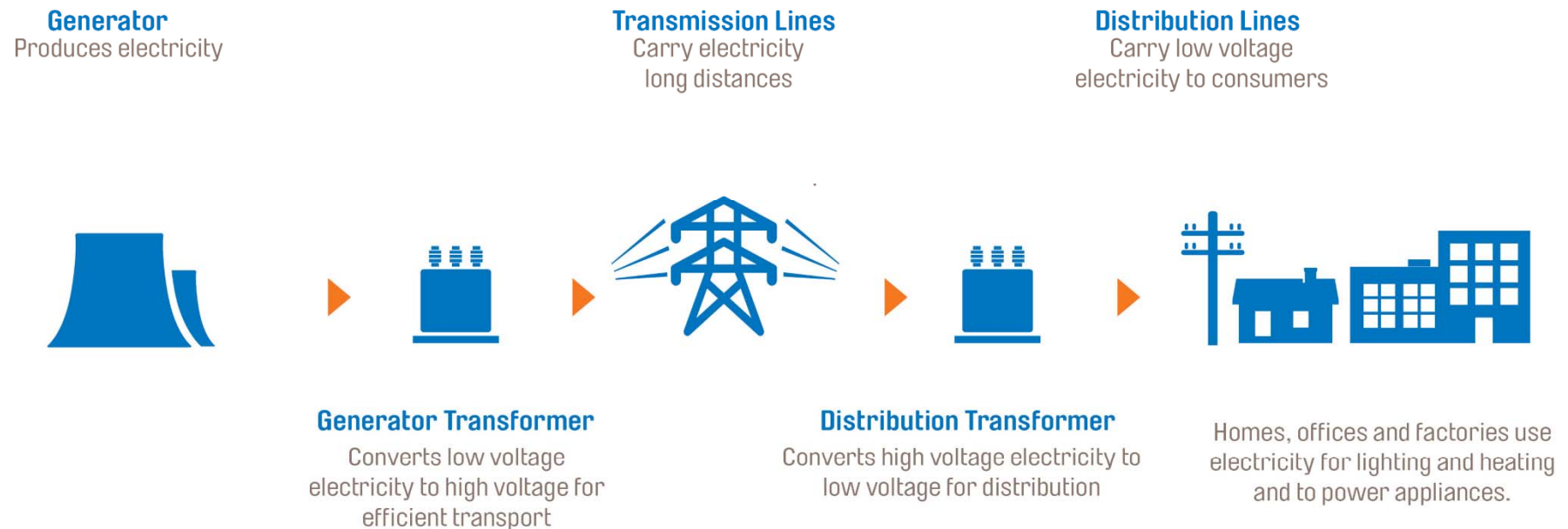
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# The energy system of yesterday

Large coal-fired power stations transporting power through transmission and distribution to customers



# The energy system of tomorrow

Diverse large-scale and small-scale low-emissions generation supplied through an intelligent network

**Generator**  
Produces electricity



**Generator Transformer**  
Converts low voltage electricity to high voltage for efficient transport



**Transmission Lines**  
Carry electricity long distances



**Distribution Transformer**  
Converts high voltage electricity to low voltage for distribution



**Distribution Lines**  
Carry low voltage electricity to consumers

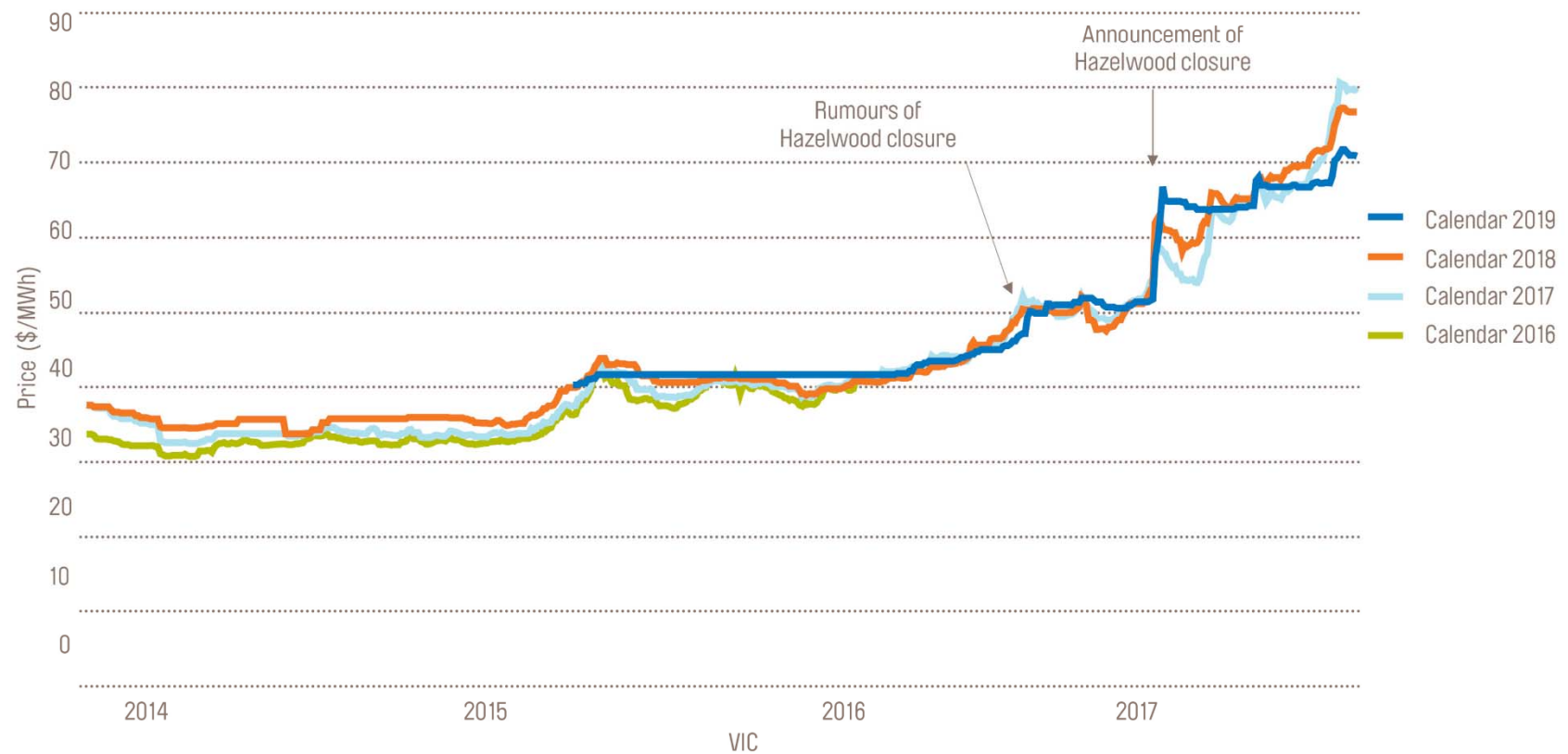


Homes, offices and factories use electricity for lighting and heating and to power appliances.



# Wholesale cost drivers

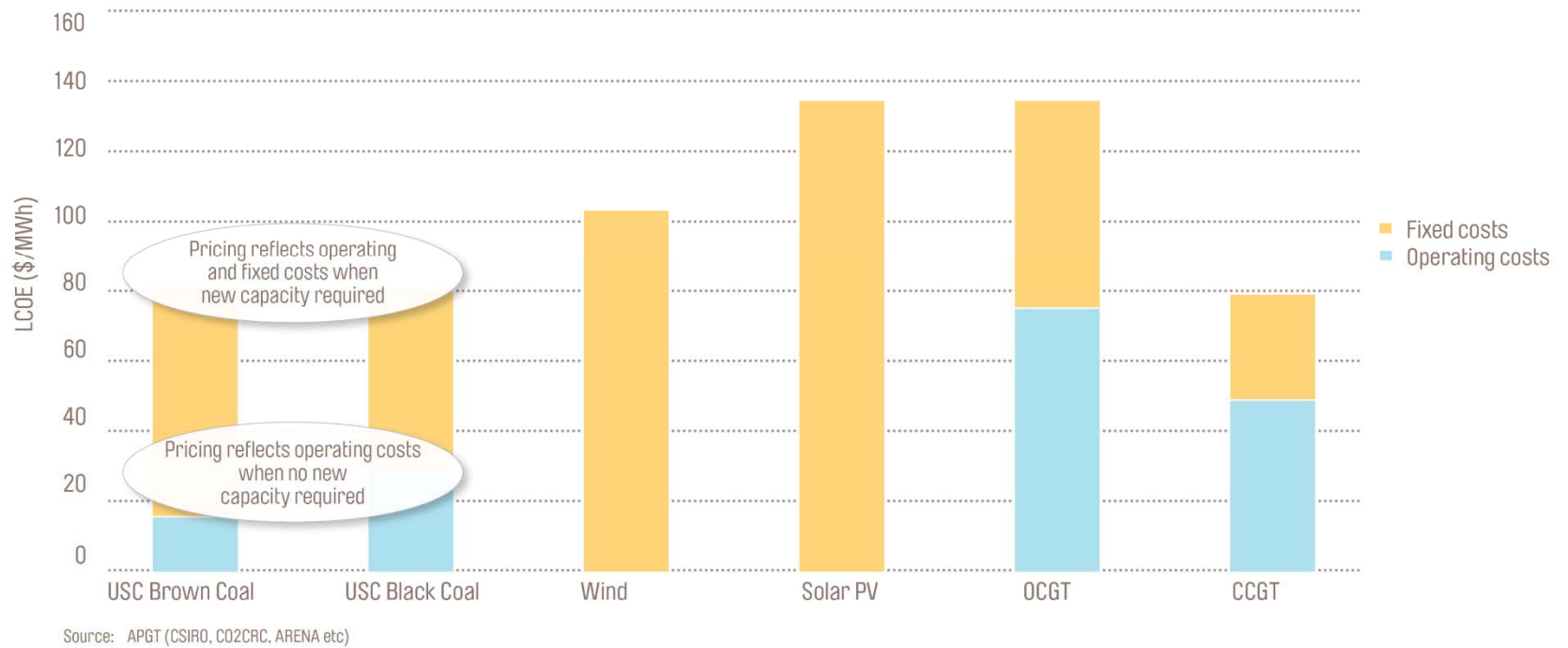
Pricing driven by need to invest in new plants



Source: Market data

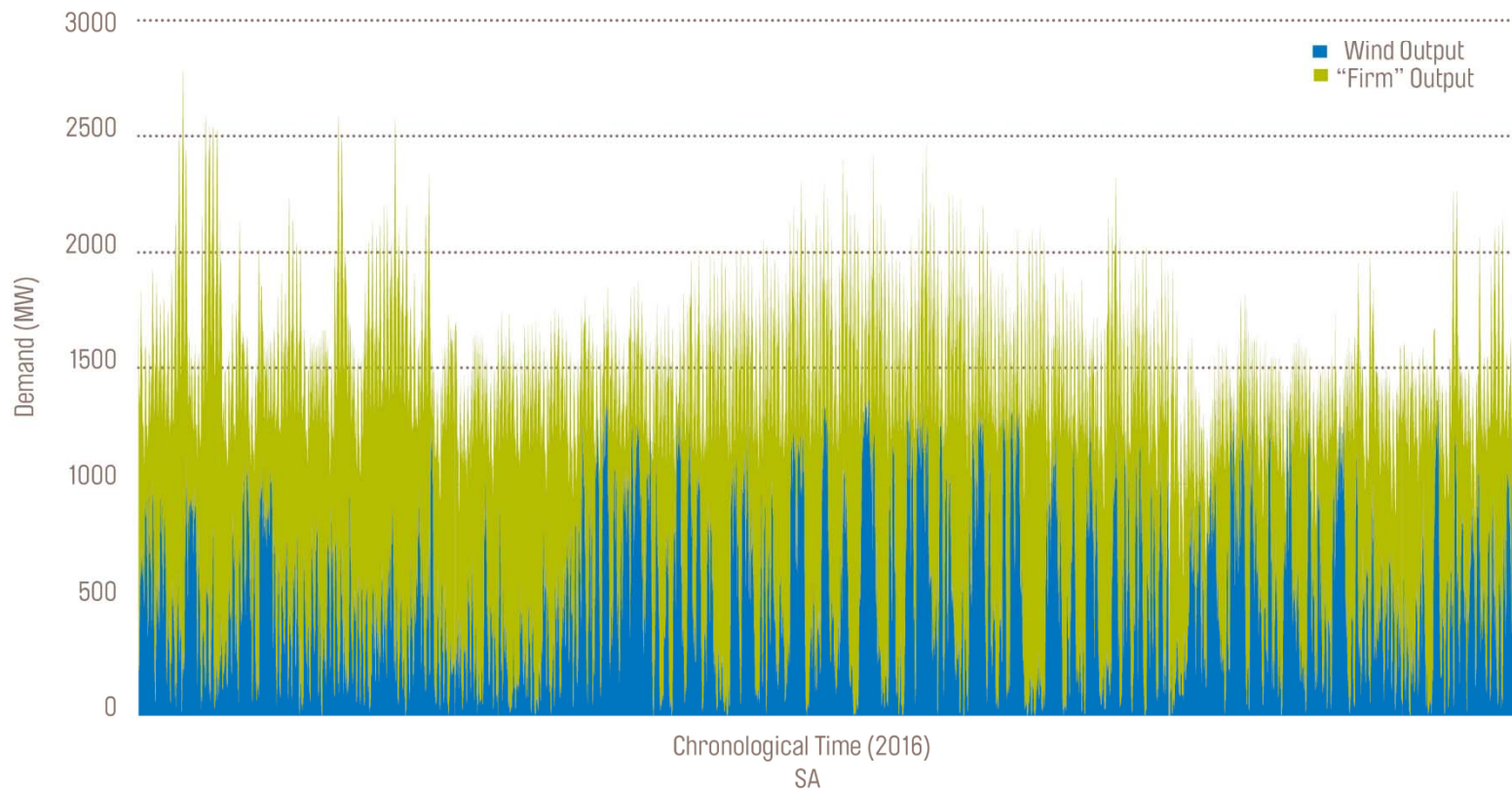
# Wholesale cost drivers

Long-term costs likely to be driven lower due to technology



# Intermittency

We need to shift away from 'baseload' plant to efficient more flexible gas-fired plant and storage

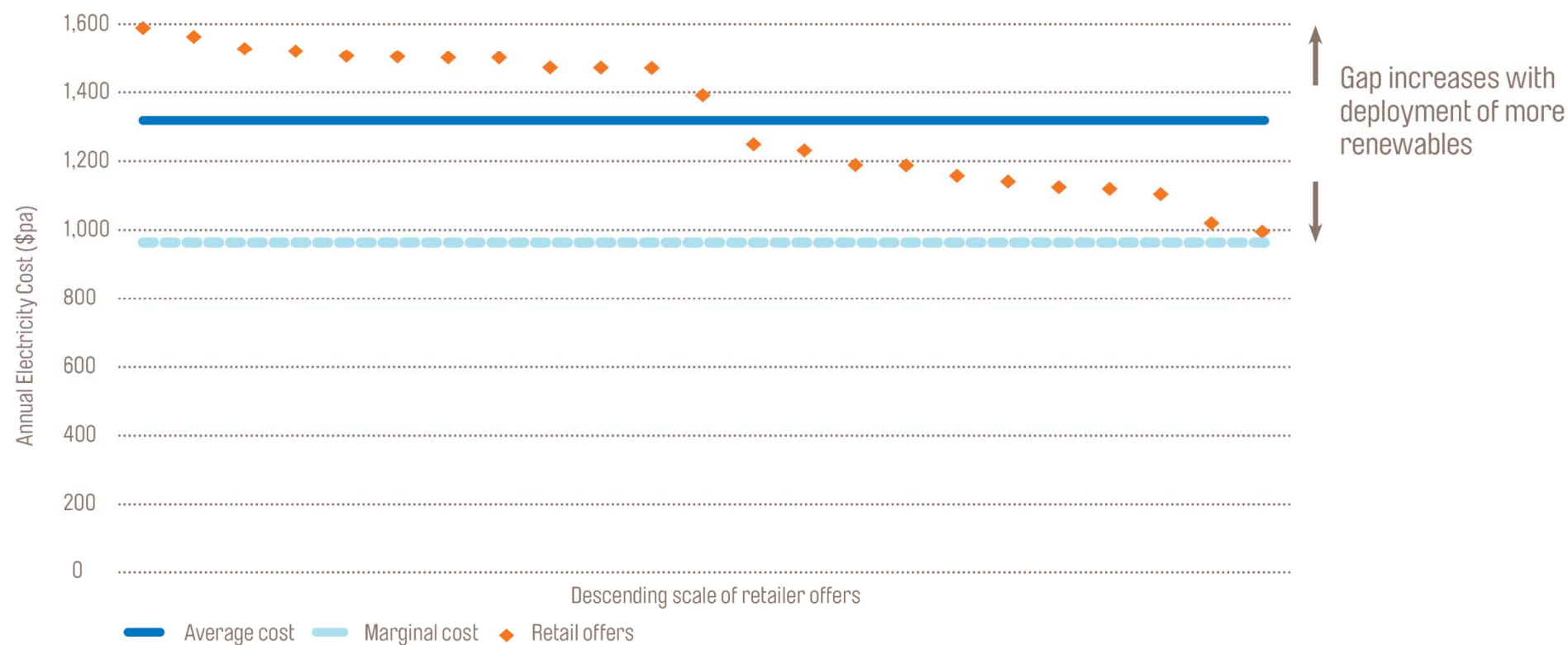


Source: Market data



# Retailing and competition behind the meter

The gap between 'average' cost and 'marginal' cost likely to widen – increasing competitive forces



Source: Adapted from Simshauser and Whish-Wilson (2017)

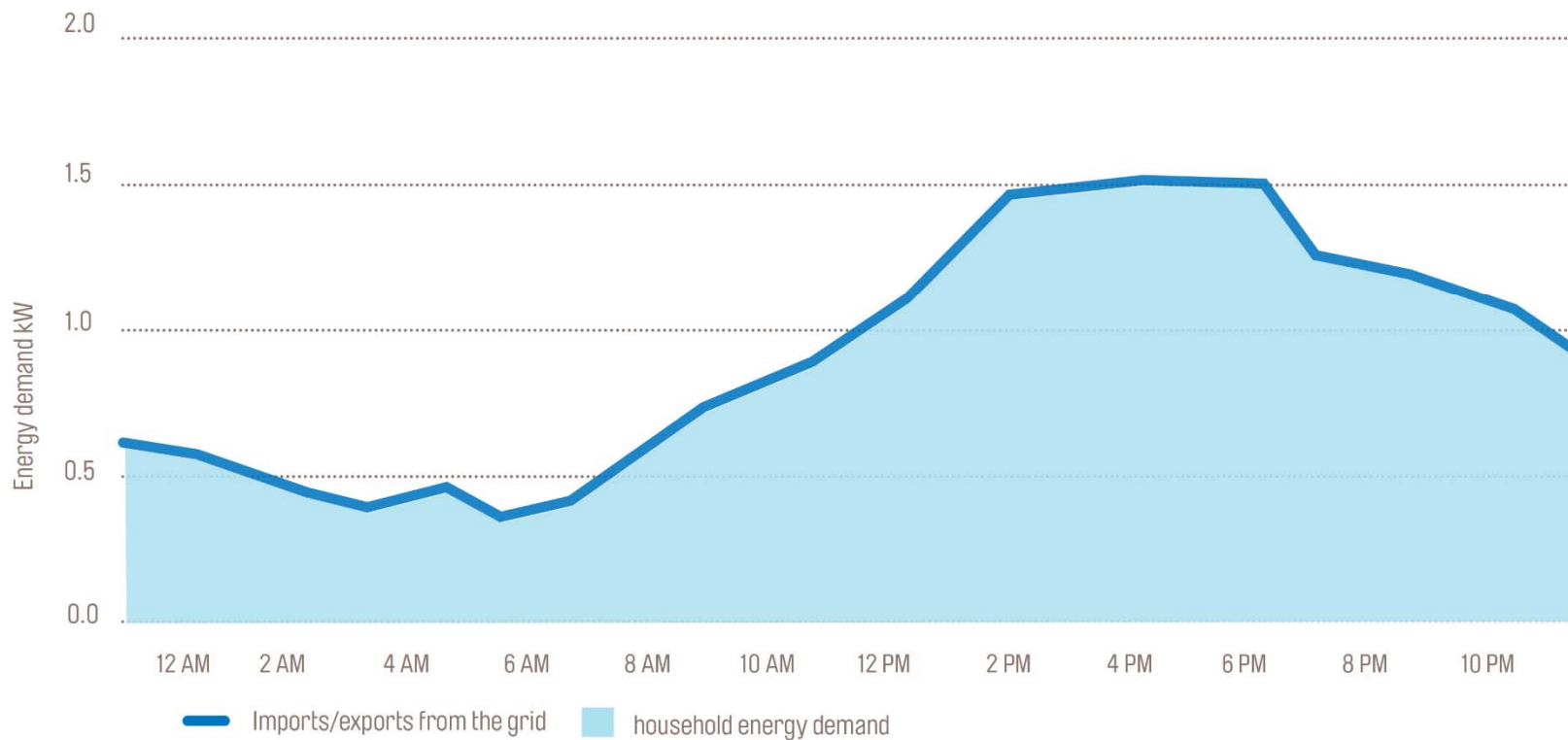


# Supporting vulnerable customers

- > \$6.5m Affordability Initiative provides debt relief, financial counsellors, solar for high consumers.
- > Building on this with *AGL's Fairer Way* package:
  - » Concession card and hardship program customers are not charged late fees
  - » Customers participating in AGL's hardship program, Staying Connected – will be offered guaranteed (non-conditional) discounts
  - » We will write to customers with a registered concession card who remain on 'old' standing offers, offering to assess their needs and move them to a better plan
  - » Victorian customers on a Standard Retail Contract who receive a government energy concession will also automatically receive a 15% discount off their electricity usage charges, applying from 5 March 2017
- > Policymakers and regulators need to play their part.
- > Slow tariff reform is stifling innovation.

# Retailing and competition behind the meter

Traditional retailing largely the provision of 'risk management' services

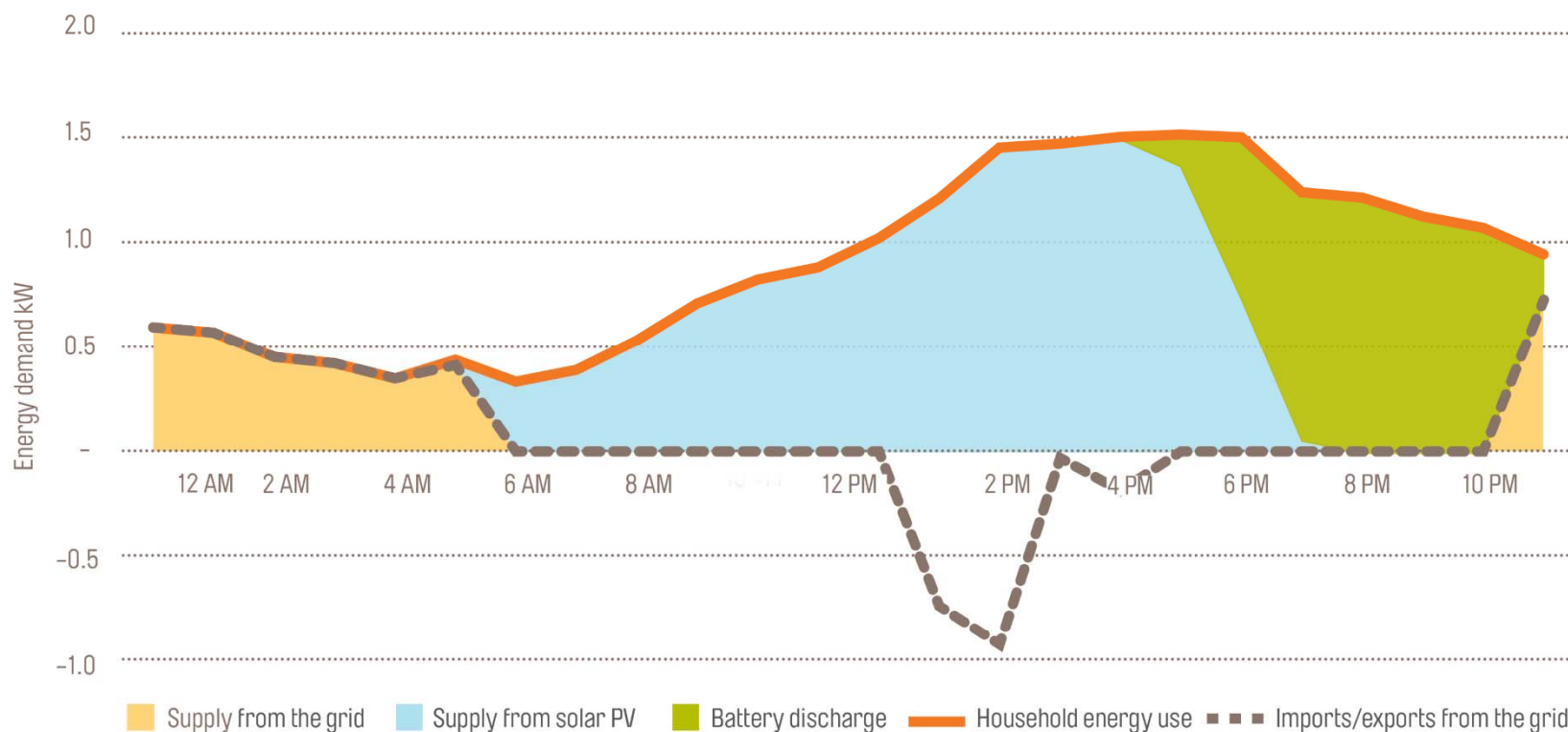


Source: Orton, Nelson, Pierce and Chappel



# Retailing and competition behind the meter

Retailing of the future will be a mix of 'risk management', new products and customer service



Source: Orton, Nelson, Pierce and Chappel

# Correcting misconceptions

Some recommendations for reform

- > Wholesale prices are rising because we need new investment and prices need to reflect both operating costs and the cost of building new power stations.
- > But longer-term, prices are likely to moderate as new technologies fall in cost.
- > We need governments to set long-term durable climate change policy to facilitate these investments.
- > In retail markets, competition will continue to produce meaningful results for customers that shop around.
- > New technology will substantially shift the way in which we think about products and services in energy markets.
- > But cost-reflective pricing is critical. If we don't get pricing right, there will be no arbitrage to take advantage of and innovation will stall.