

# **Could a Greater Emphasis on Demand Management Hinder Future Energy Efficiency Initiatives?**

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**ENERGEIA**

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# Who Are These Guys?

- Focused on supporting clients tackling the industry's greatest challenges and opportunities:
  - Australia's only real-time demand response system (King Island)
  - 15-20 year Customer, Network and Organisation of the Future visions
  - Market outlooks emerging energy technology, e.g. solar PV, microgrids
  - Energy services growth and margin strategies
  - High margin smart meter enabled products and services
- Proprietary research enabled insights and advisory services
  - Electric vehicles, storage, renewables, energy efficiency, demand response, smart grids, cogeneration (CHP)





# Overview

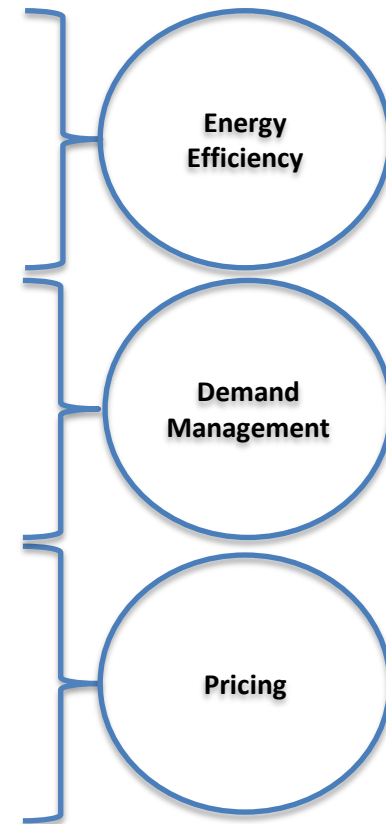
- Australian policy development
- Four key problems facing the electricity market
- Solution being considered
- Impact on energy efficiency
- All is not lost!



# Australian Policy Developments

- The key Australian developments over the past 18 months include:

- The National Energy Savings Initiative (NESI) maps out 2020 energy efficiency target
- Victorian VEEC
- Freedom of Choice Review (DSP3) kicks off AEMC's third demand side participation review
- Government investigation of mandating the DRED standard
- AEMC Power of Choice
- Productivity Commission report
- Senate Committee on Electricity Pricing



# Problem 1

- Energy price rises are the dominant community energy issue

## Aged 'too scared for cup of tea'

### Smart meters are gouging

IT is my understanding the new "time of use" (smart) meters now being installed in new homes, are eventually to be in all homes, and designed to encourage energy use in non-peak hours and discourage use in peak times.

This is achieved by charging much more during peak hours. The extra expense is a logical deterrent to adding to the already heavy demand at peak times.

What I think is grossly unfair is about 2 per cent higher when one of these meters is compulsorily installed. Surely that is a disincentive to do the right thing? Energy Australia says the price rise is to recoup higher meter-reading costs. I say the daily charge should be equal across the board. Surely Energy Australia should be encouraging people to take up these meters, rather than penalising us?

Annette Pryor Corlette

## Pleading for a break from electricity bills

### Working families doing washing at 1am but still paying more

Richard Noone

IT IS not unusual for mother-of-four Kelly Behrend to be up at 1am doing washing to save money on electricity. But despite switching off lights and using appliances only at off-peak times, her quarterly bill increased more than \$50 in the past two years.

"I'm always turning appliances off when we're not using them, I even pull out the plugs because I've heard they draw 'phantom power' even though they're not on," she said.

Mrs Behrend and Nathaniel said their choice of electricity provider was a matter of when they built rented house at Wadalba on the state's Central Coast. The property was fitted with smart meter from EnergyAustralia. "I only use the things of power — the vacuum, the vacuum drier, the vacuum said, 'I have to be up until 1am,'" she said. "My quarterly bill used to be better off if I paid more in the morning. That's why I'm trying to get the kids to get up earlier. I felt trapped and her 'so-so' move in you just want to switch on," she said. "I got the time to analyse which company has the best plan?"



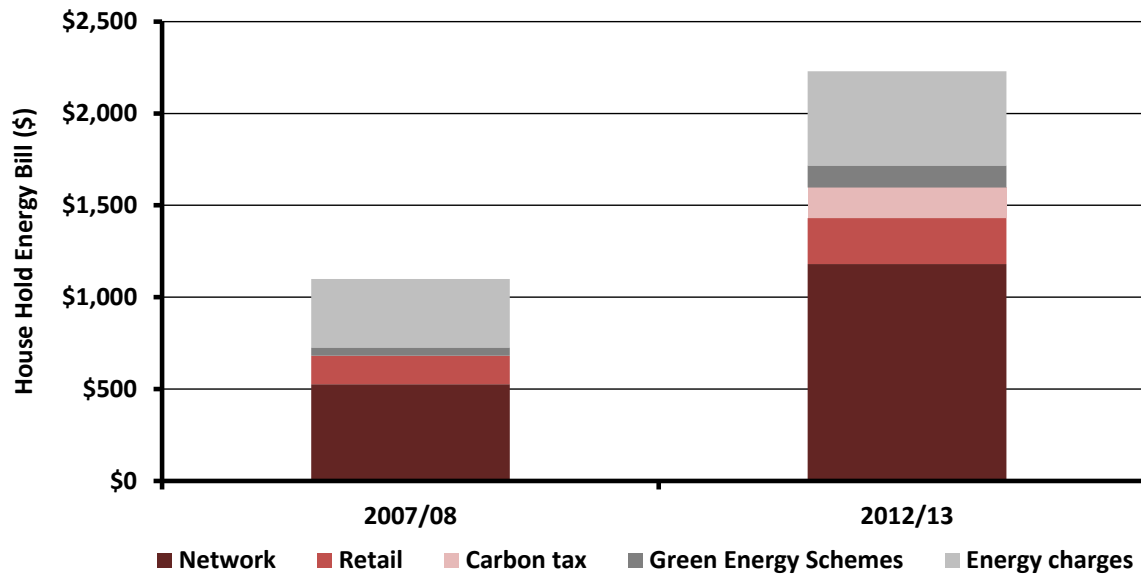
**Power struggle**  
dailytelegraph.com.au  
exclusive

## Time's up for meters



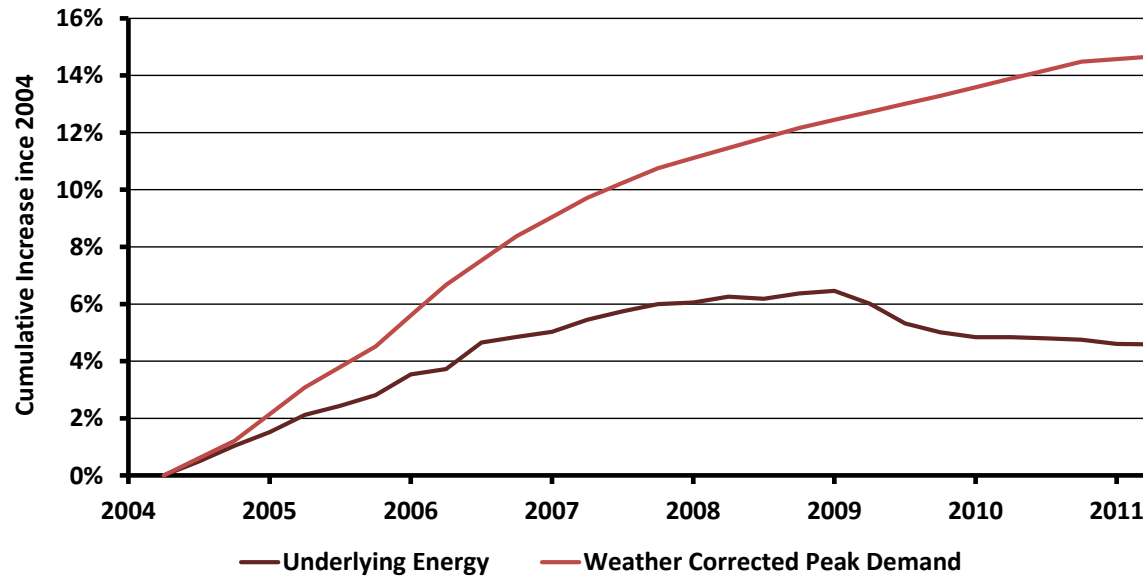
# Problem 1

- 100% increase in NSW network charges over 5 years



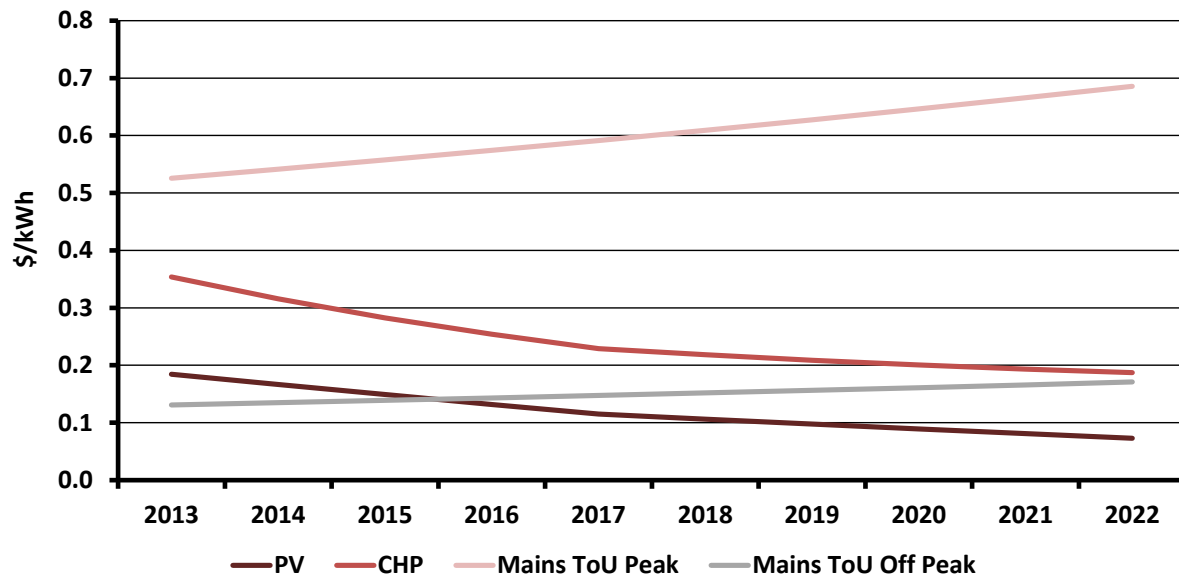
## Problem 2

- The divergence between demand and energy growth is expected to continue



# Problem 3

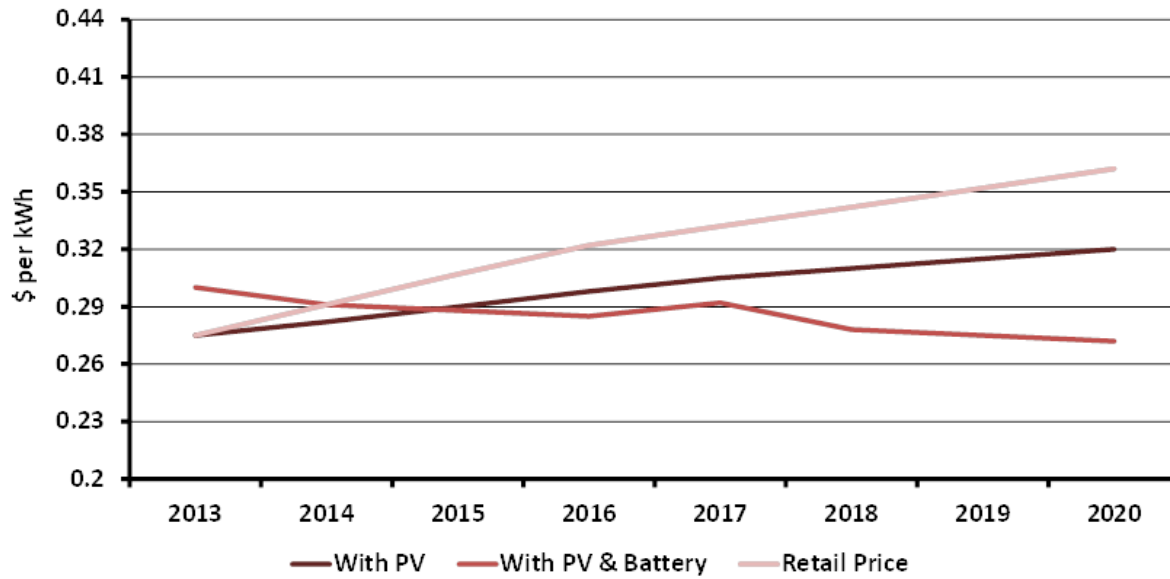
- Forecast take-up of distributed energy resources (DER) will exacerbate problem 2
- Depending on pricing, small scale PV and CHP costs are becoming attractive on an LCOE basis





# Problem 3

- Not unique to Australia
- UBS forecast for the price of retail prices versus DER for residential customers in Germany



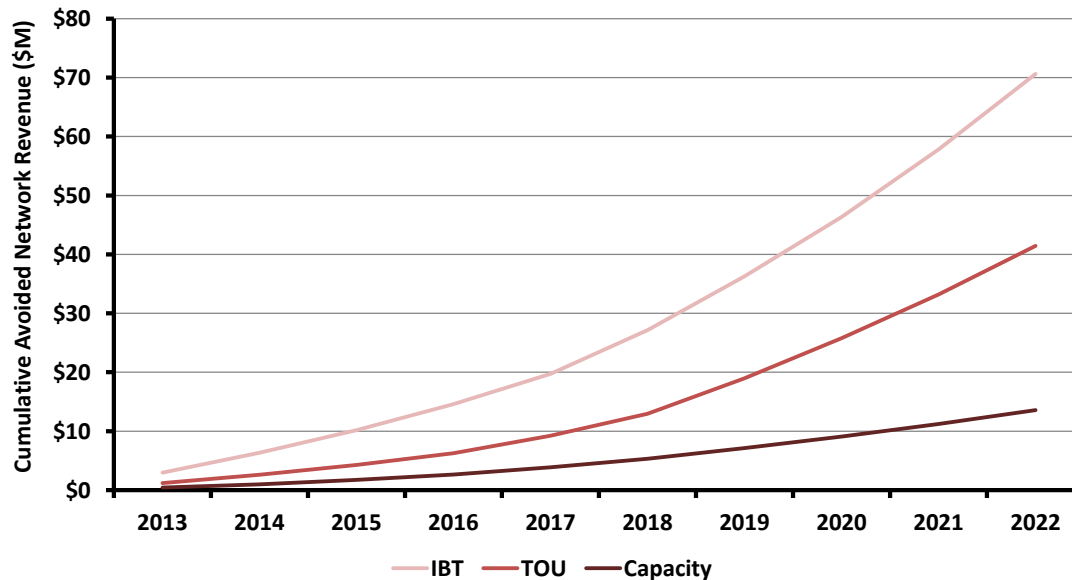


## Problem 4

- DNSP's load factors continue to decline. For example in SA load factor declined by 33% from the early 2000's to 2011.
- As revenues for DNSP's decline, network charges must rise further to compensate
- This has been termed "The Energy Market Death Spiral"

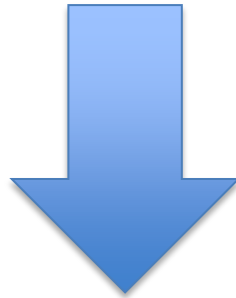
# Impact of “The Death Spiral” - Residential

- Energeia modelling forecasts for NSW:
  - Further take up of DER;
  - Further erosion of network revenues;
  - Distribution charges increase further to compensate



# The Proposed Industry Solution

- Time based pricing is being discussed; but
- Capacity based pricing is rapidly being recognised as the only sustainable solution to maintain network revenues and stop cross-subsidies

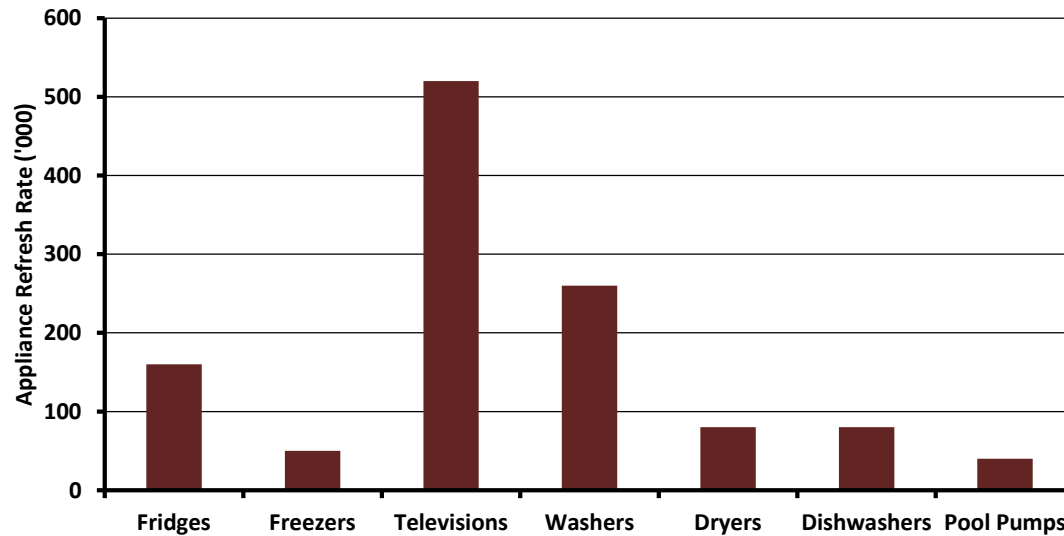


The impact being

- Customers have much less incentive to reduce energy consumption – only demand !

# All is Not Lost !

- While consumers will face diminishing incentives to reduce energy
- DER penetration will continue to reduce grid supplied energy
- Energeia's modelling of NSW per annum appliance refresh rates is also demonstrating some moderate energy efficiency gains.



# Thank You

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