



Energy industry – challenges ahead

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Tim Nelson

Future Grid Cluster Research-Industry Symposium

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Agenda

- > Have we forgotten the objectives of microeconomic reform of the electricity system
 - > Dynamic, allocative, technical efficiency
 - > Reform is at best partially complete
- > Issues affecting the market
 - > Energy market design, policy-induced capacity, declining demand
 - > Gas markets
- > A potential 'slow-burn California crisis in reverse'?
- > Emergence of a 'partial grid substitute' requires outstanding reform to be quickly completed
 - > Tariff design and metering are key
 - > Reform needs to be completed on a 'whole of system perspective'

The Hilmer Reforms

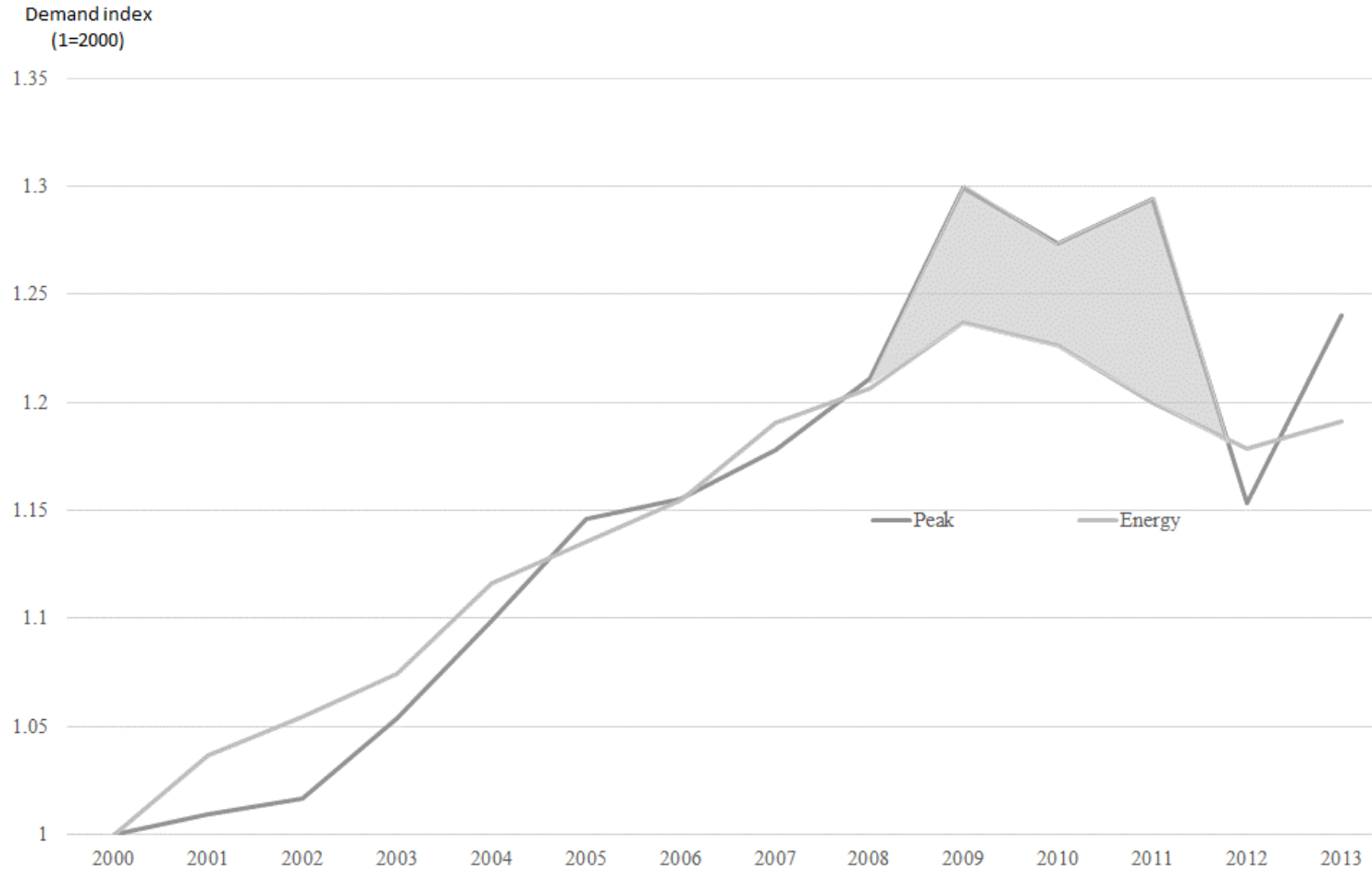


Issues affecting the
market



Demand...

Demand declining has led to reductions in capacity utilisation

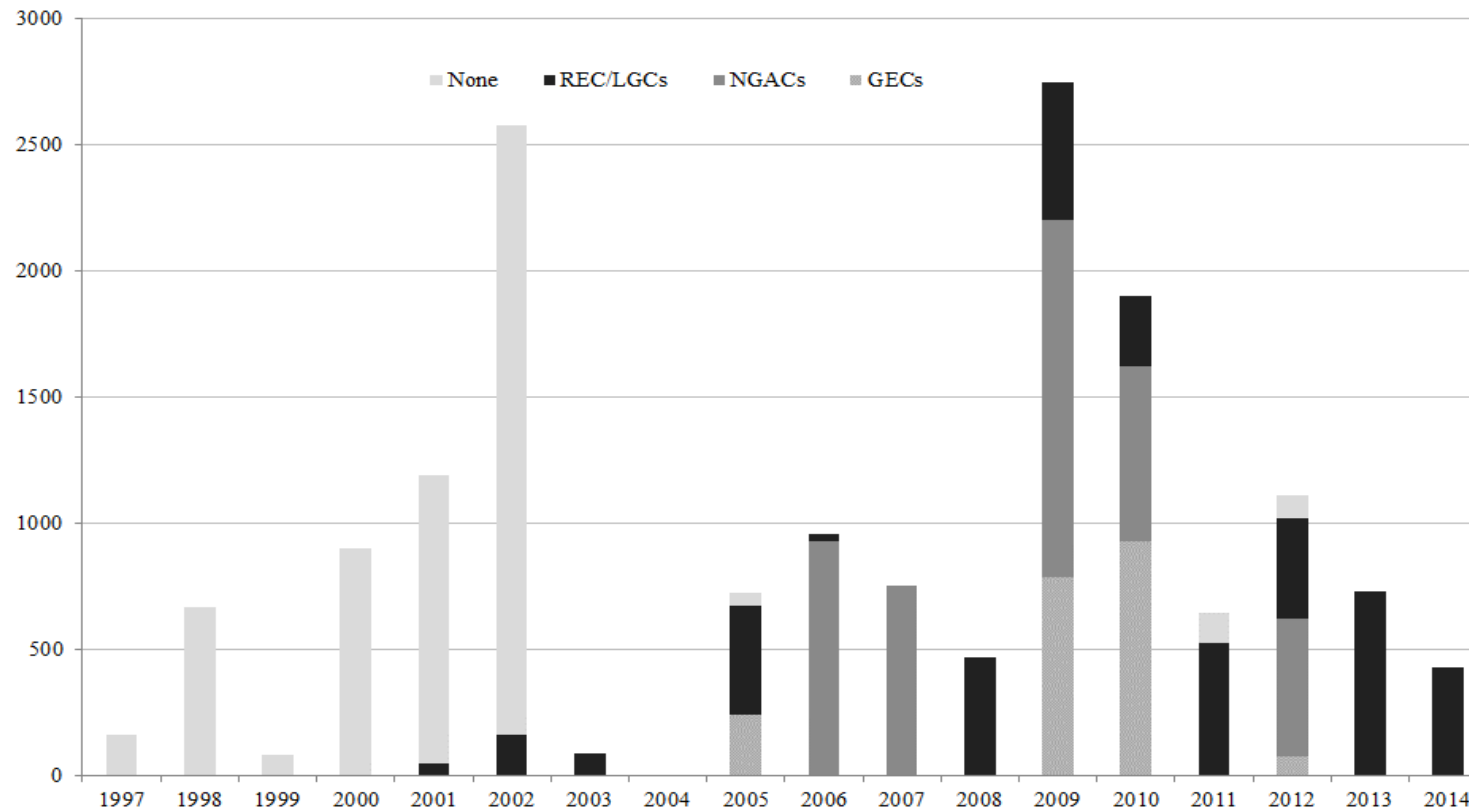


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Policy induced capacity...

Policies have been introduced which have created significant incentives for new capacity despite a demand/supply balance not warranting it

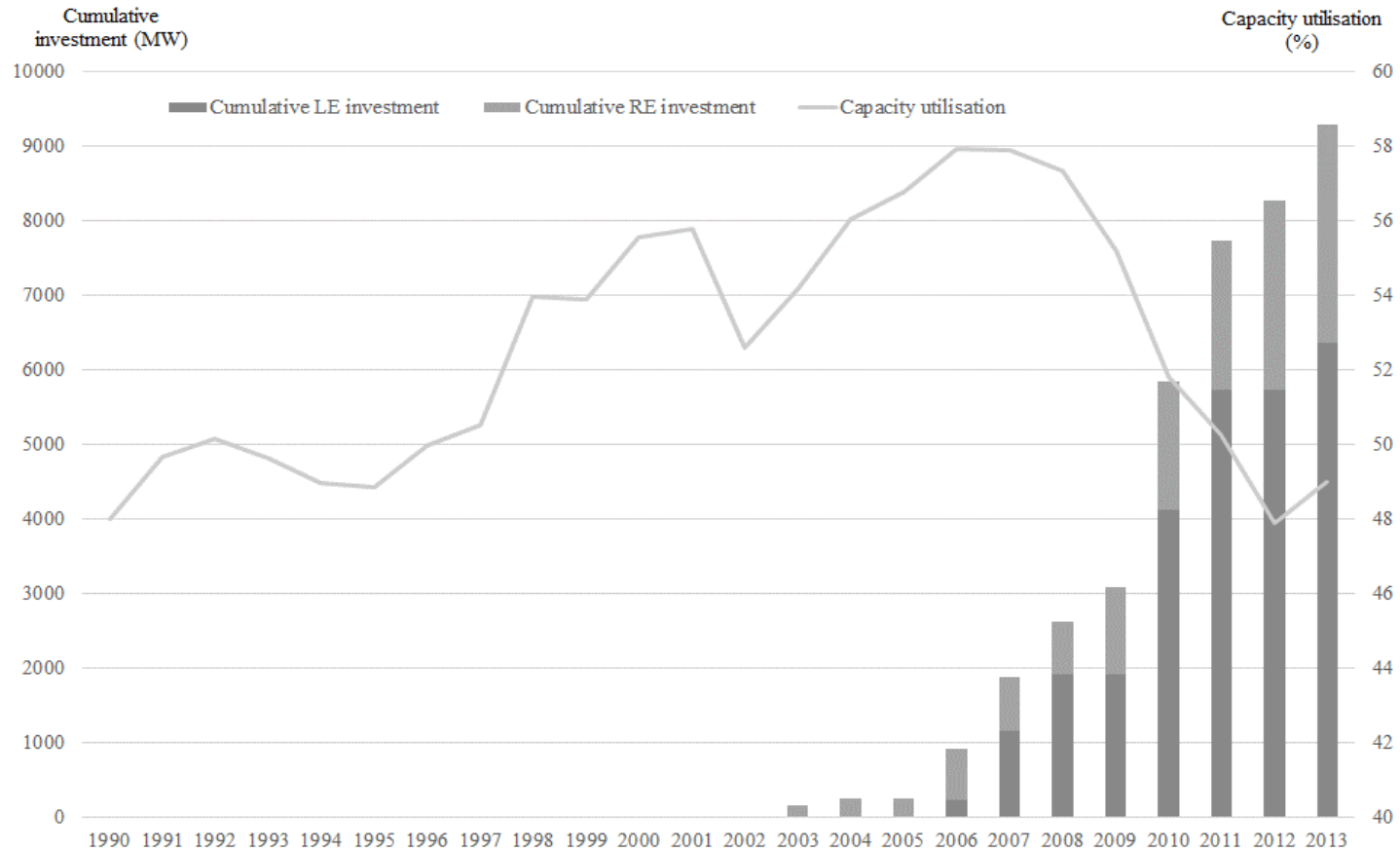
New investment (MW)



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Capacity utilisation....

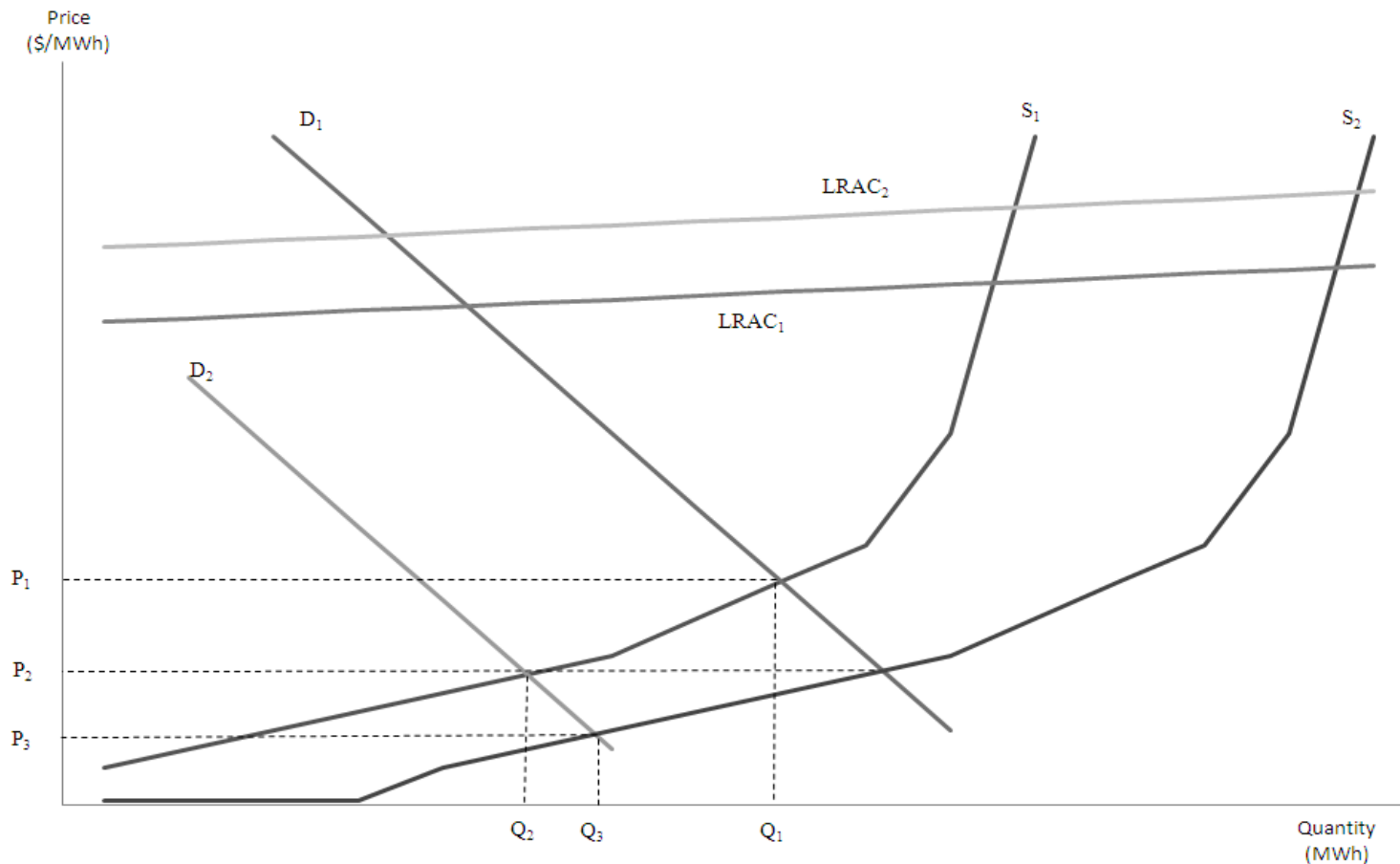
Demand declining and new policy-induced capacity has led to reductions in capacity utilisation



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Is the status quo sustainable?

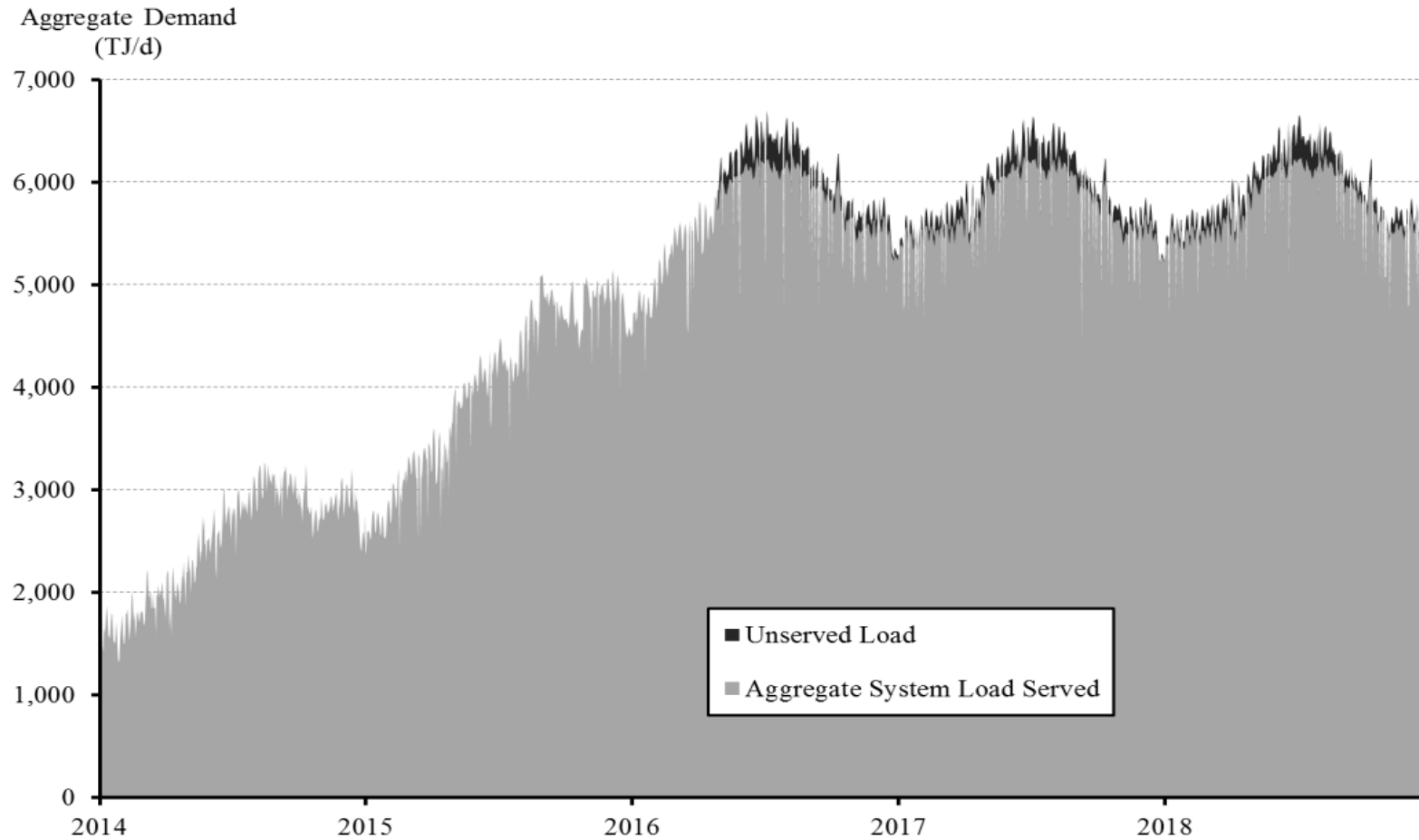
Key question for policy makers relates to sustainability of NEM design - short-term v long term solutions



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Gas....

Gas markets are becoming extremely tight due to LNG loads coming online

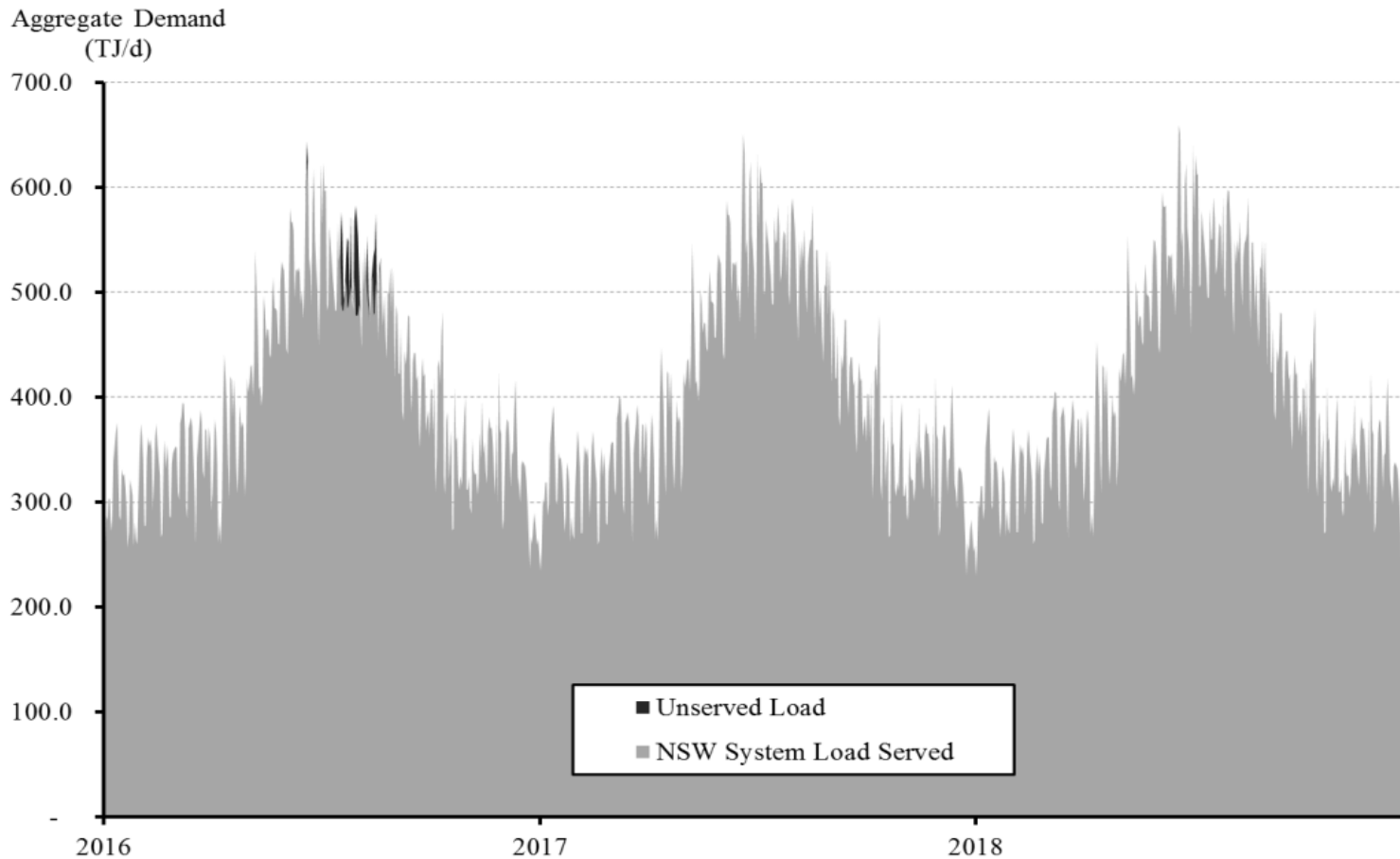


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Gas....

Gas markets are becoming extremely tight due to LNG loads coming online – avoiding a death spiral?



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A potential 'slow-burn
California style crisis' in
reverse?



A slow-burn California style crisis in reverse?

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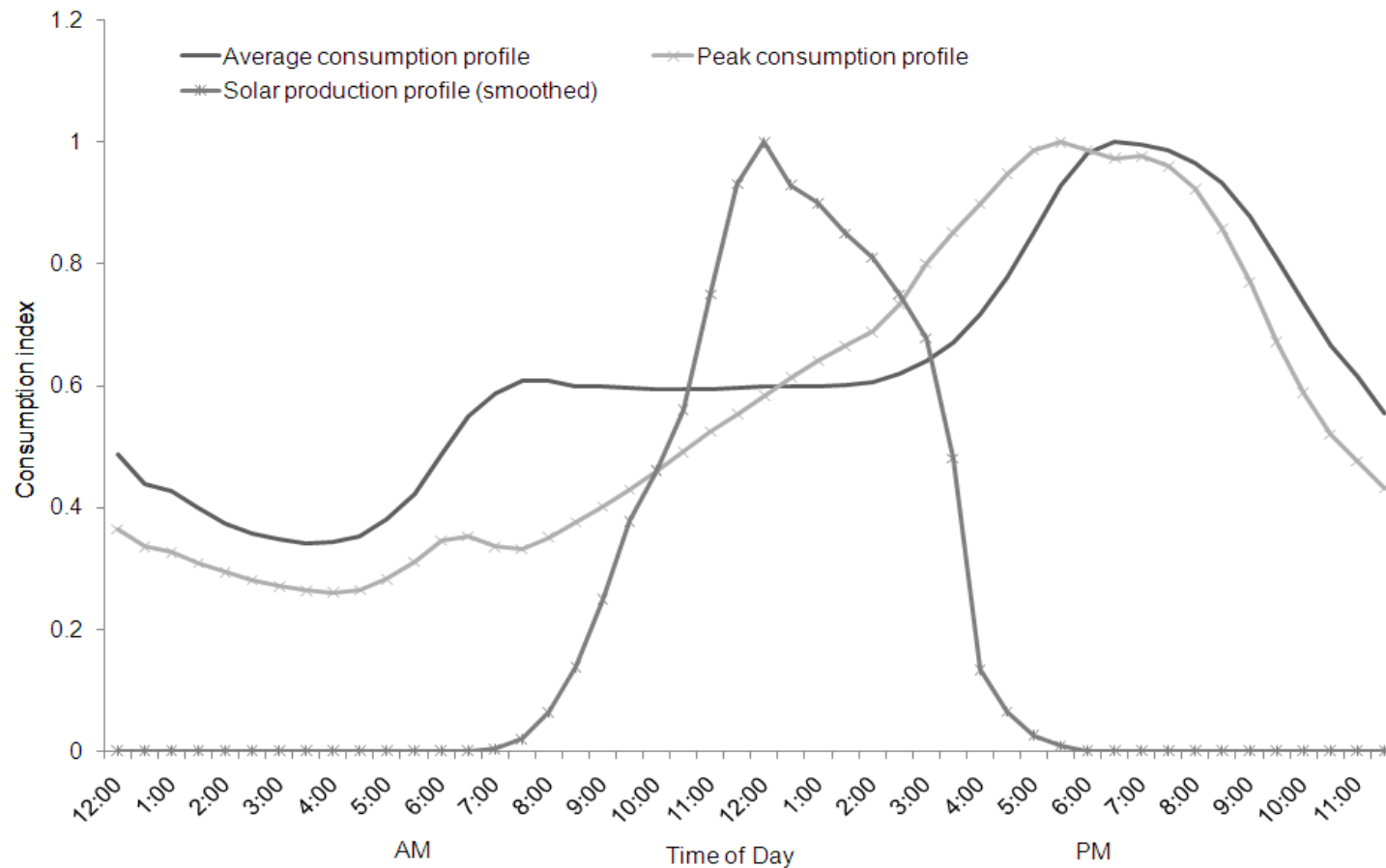
- › California crisis created by inability of retailers to pass increased wholesale costs through to customers
- › In Australia, we have seen rapid increases in end-user pricing while wholesale market revenues have declined materially
- › Demand is influenced by end-user pricing, not wholesale market outcomes
- › Generation component of the supply chain comprises only 30% of end bill compared to 45-50% in 2002
- › Without reform to encourage better allocative efficiency (end-user tariff design), generators may experience a 'slow-burn' deterioration – in the long term this may manifest as lower reliability
- › Stay tuned – new AGL working paper is looking at these issues....

Reforming tariffs



Capacity utilisation, solar PV, A/C and demand

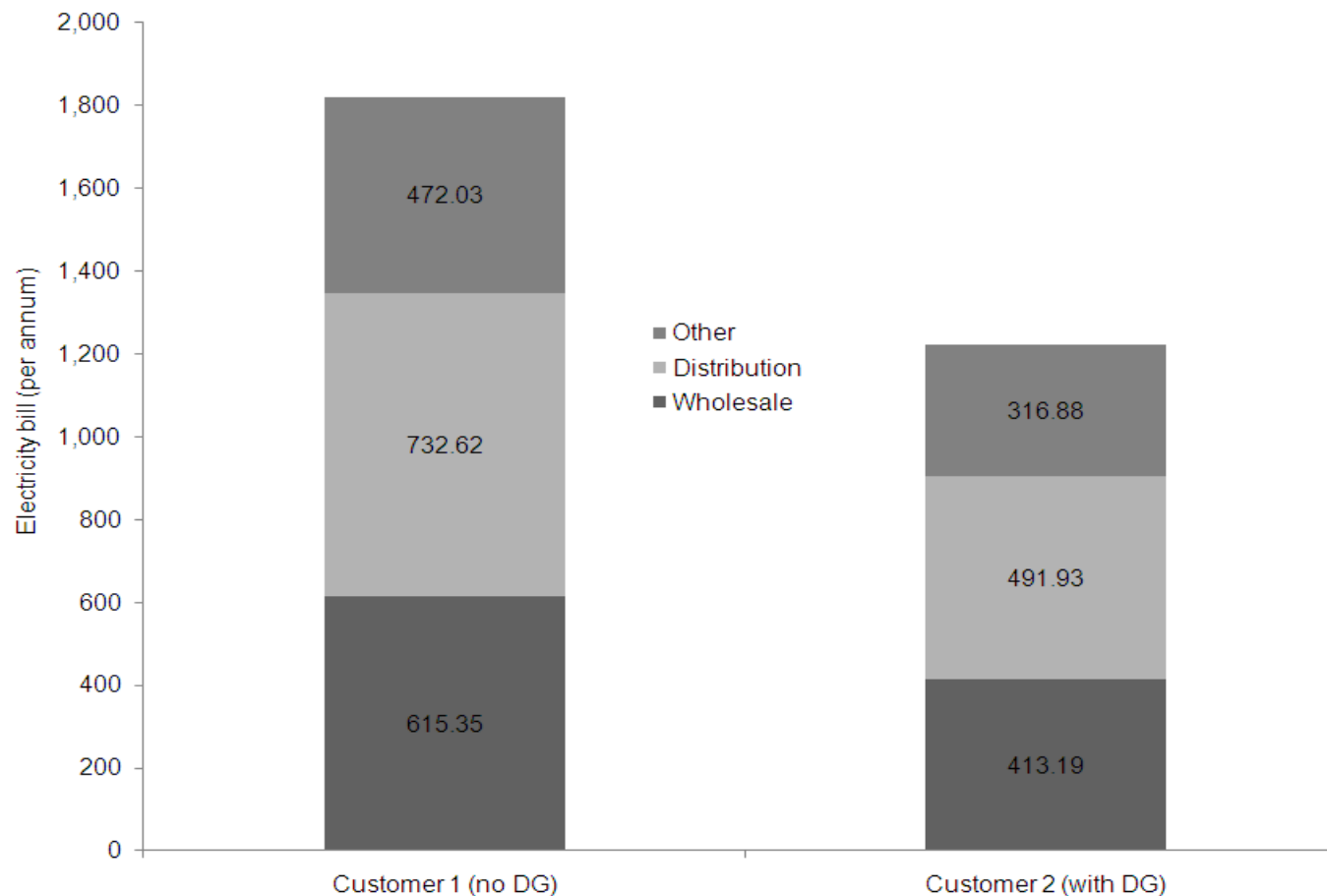
Free riding happening everywhere in the retail/network components – which is influencing wholesale market outcomes



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Capacity utilisation, solar PV, A/C and demand

Current tariff design is unsustainable – significant wealth transfers are occurring due to lack of allocative efficiency



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Completing the microeconomic reform process

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- > Policy-makers need to better consider the impacts of individual supply chain component policies on the 'whole of supply chain'
- > Tariff reform is the 'unfinished business' of microeconomic reform of the energy industry
- > Addressing tariff reform should be considered concurrently with decisions related to energy market design/renewables
- > Options:
 - > Demand charges
 - > ToU
- > Most importantly, metering services needs to be contestable and consumer led
- > Addressing tariff reform should be considered concurrently with decisions related to energy market design/renewables

Further information

- › AGL Applied Economic and Policy Research Working Paper Series available at www.aglblog.com.au
- › On Twitter (@tanelsonaus)
- › *Distributed Generation and its Implications for the Energy Industry* – do yourself a favour and buy a copy – best \$141 you will ever spend!

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