

Developments in Retail Electricity Markets

2017 Australian Conference of Economists

Sofitel Sydney, 21 July 2017



DR KRIS FUNSTON, kris.funston@aemc.gov.au
SENIOR DIRECTOR, RETAIL AND WHOLESALE MARKETS
AUSTRALIAN ENERGY MARKET COMMISSION

Overview

1. Recent events
2. Evolving retail market
3. Electricity market structure and design

1. Recent events – retail price increases

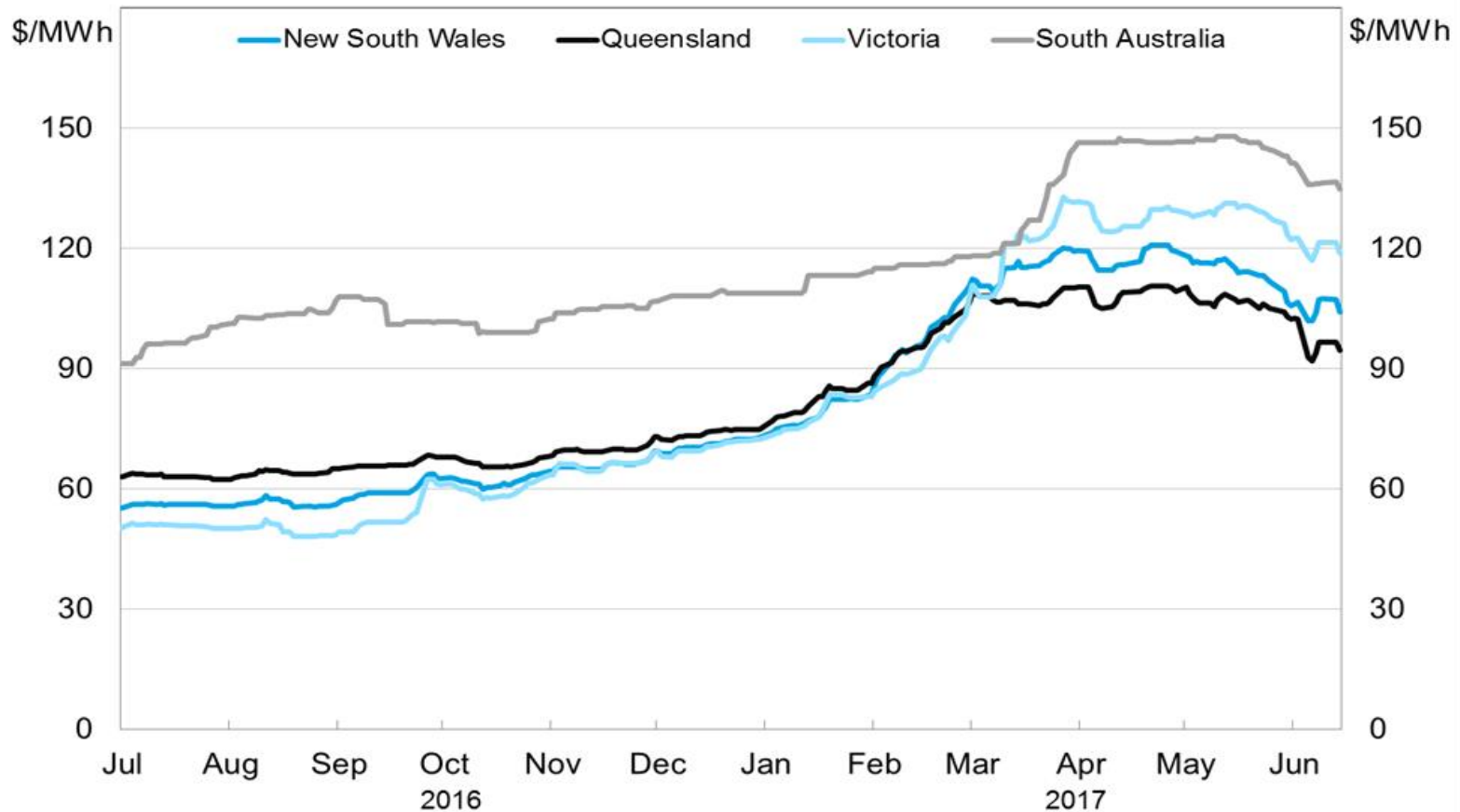
Increased bills for a representative consumer from 1 July 2017

Retailer	Network	Increase
AGL	Ausgrid (NSW)	18%
	SAPN (SA)	21%
	Energex (QLD)	5%
Energy Australia	Ausgrid	21%
	SAPN	21%
	Energex	9%
Origin Energy	Ausgrid	15%
	SAPN	16%
	Energex	4%
Powershop	Citipower (Victoria)	19%
Click		10%
Dodo		18%
Commander		16%
Globird		11%
Alinta		3%
BluNRG		21%
Qenergy		41%
Sumo Power		43%

*Note - Results based on AEMC estimate using representative consumption data from AEMC Residential Price Trends 2016

1. Recent events – wholesale cost

Price of baseload swap electricity futures contracts 2017-18



Source: ASX Energy

- Wholesale costs approximately 1/3rd residential customer bills
- Jul 2016 to April 2017, contracts for 2017-18 increased 50-150%

2. Evolving retail market

- New technologies
 - smart meters
 - solar, batteries
 - home energy management systems - “internet of things”
 - electric vehicles
- Changing consumer preferences
 - over 20% have solar panels
 - recent survey – next 2 years consumers likely to install
 - solar panels 18%
 - home energy management systems 18%
 - Batteries 21%
- New retailers and energy service providers
 - use technology platforms to optimise consumption
 - vertically-integrated behind the meter solutions

2. Evolving retail market - consumer

NEW AND EMERGING TECHNOLOGIES AND SERVICES

New and emerging technologies and services are changing the way customers interact with energy, and how customers interact with retailers

How can I control household appliances from my smartphone?

Can I choose when to use the battery?

How do I sell the energy I produce?

Can I get cheaper bills if I let my energy retailer control some appliances?

Can I program my house to warm up before I get home in winter?

How do I get real-time energy data for my home?



SERVICES MADE POSSIBLE BY NEW TECHNOLOGIES



Smart meters allow real-time usage information



Produce and store your own electricity



Control when your PV sells energy, and when it charges your batteries



Time of use pricing for new ways to save



Remote controlled lighting, heating and cooling



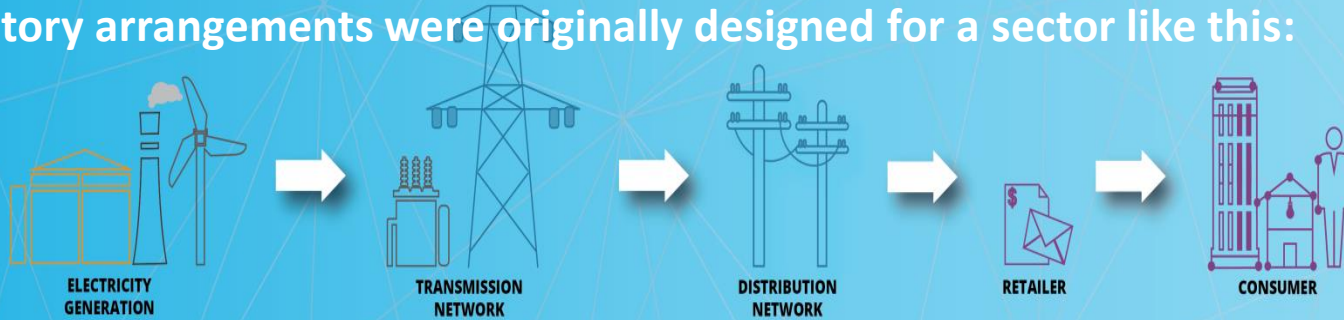
Allow providers to control your appliances in return for credits

2. Evolving retail market – product competition

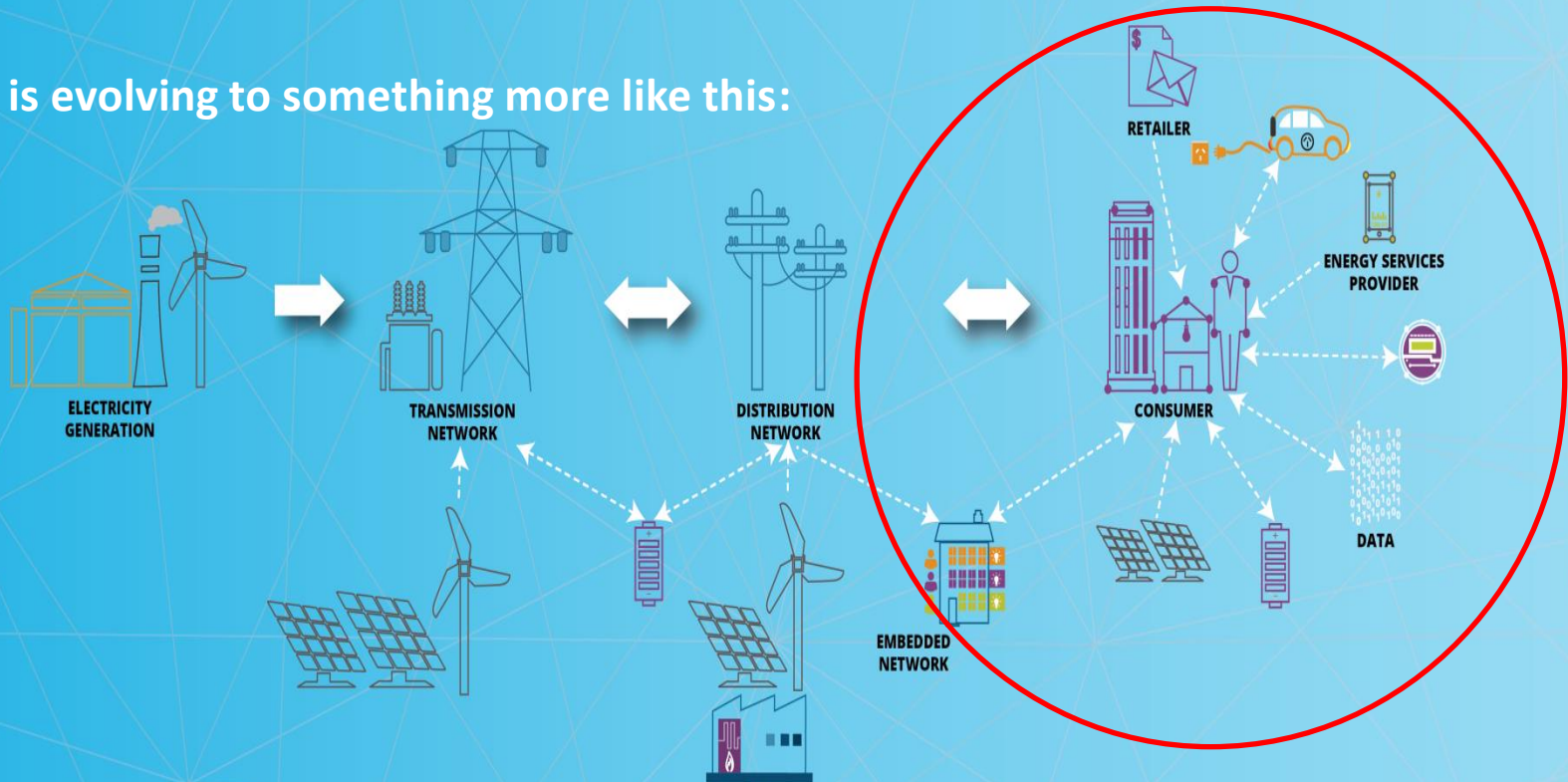
- Emerging value-add product and services competition
- New retailers
 - Powershop – pre-paid power packs, mobile app
 - Mojo – subscription model – e.g. pay TV or Costco
- New energy service providers
 - Telstra/Honeywell – automated smart home services
 - Habidapt – energy management services
 - Evergen/Reposit/Greensync – smart battery services including offering GridCredits and Virtual Power Plant
 - Power Ledger – peer-to-peer energy trading
 - PowerUP – outsource switching to find best deals for consumers
 - Matter Technology – allow landlords to sell energy to tenants from solar
- Traditional retailers responding

3. Electricity market structure and design

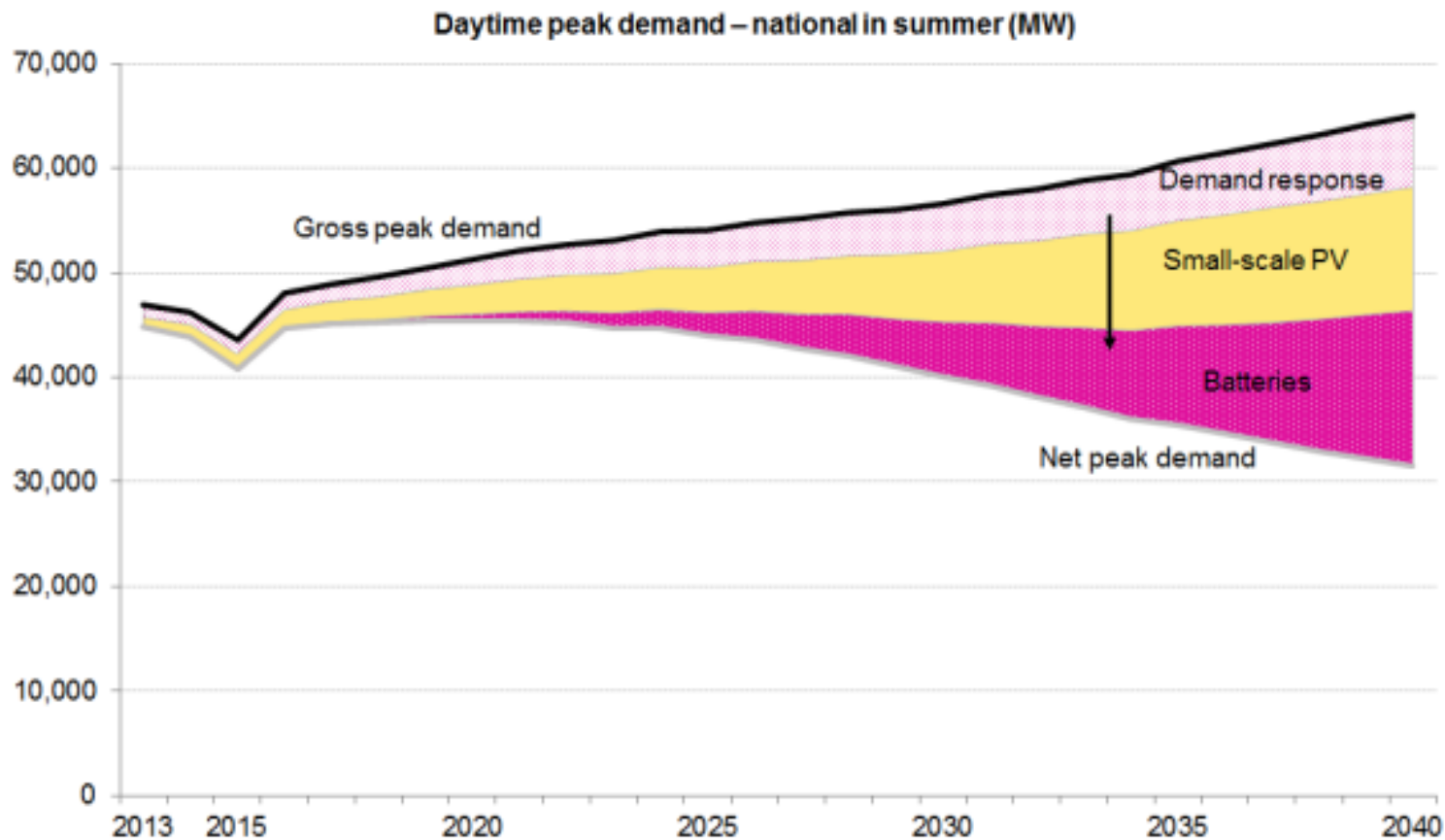
Our regulatory arrangements were originally designed for a sector like this:



The sector is evolving to something more like this:



3. Electricity market structure and design



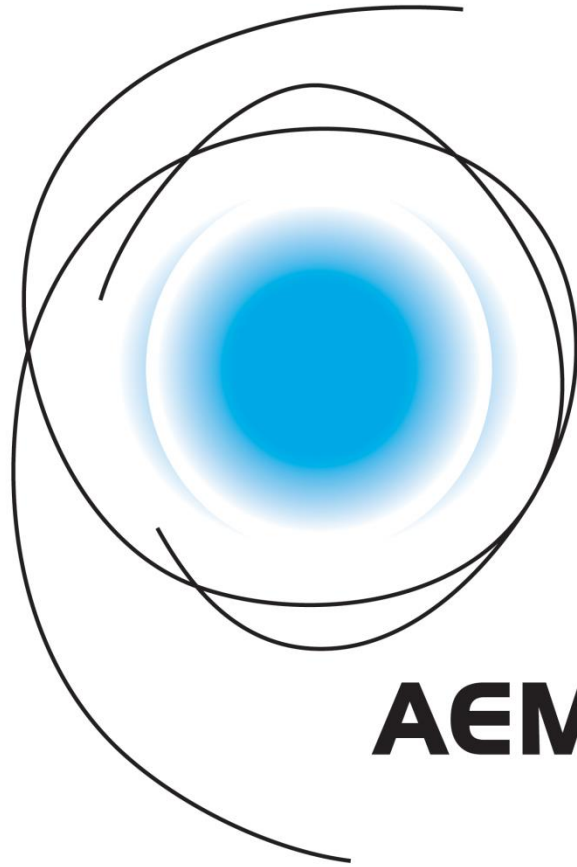
Note: net peak demand is gross peak demand less estimates for the contribution from demand response and behind-the-meter supply from small-scale PV and end-user storage.

Source: Bloomberg New Energy Finance, New Energy Outlook 2016.

- Affect of increased distributed energy over time – increased gross peak demand, but net peak demand decreases

3. Electricity market structure and design

- Future issues with evolving market and distributed energy
 - Networks – Lower volumes to cover fixed costs
 - System security and reliability issues
 - Wholesale pricing – Visibility of distributed services
- AEMC seeks to design rules that remove barriers to the efficient adoption of new technologies and utilisation of services they offer
 - Retail competition review (25 July) see <http://www.aemc.gov.au/Markets-Reviews-Advice/2017-Retail-Energy-Competition-Review>
 - Distribution Market Model (22 August) see <http://www.aemc.gov.au/Markets-Reviews-Advice/Distribution-Market-Model>



AEMC

Overview of key AEMC and external projects affecting distributed energy

**Consumer
protections**

**Economic
regulation**

**Planning &
investment**

Pricing

Annual review of the economic regulatory framework in responding to increased decentralised energy supply

Contestability of energy services rule changes

Alternatives to grid supply rule change

Replacement expenditure rule change

System security review and rule changes

5 minute settlement
rule change

Distribution market model research project

Report on divers of change impacting transmission
networks

Finkel energy security review

COAG Energy Council consultations on stand-alone power systems, battery
storage registration and behind-the-meter consumer protections

AER demand management incentive scheme and innovation allowance