



SA Power Networks

# Smart demand – a distributor's perspective

April 2014

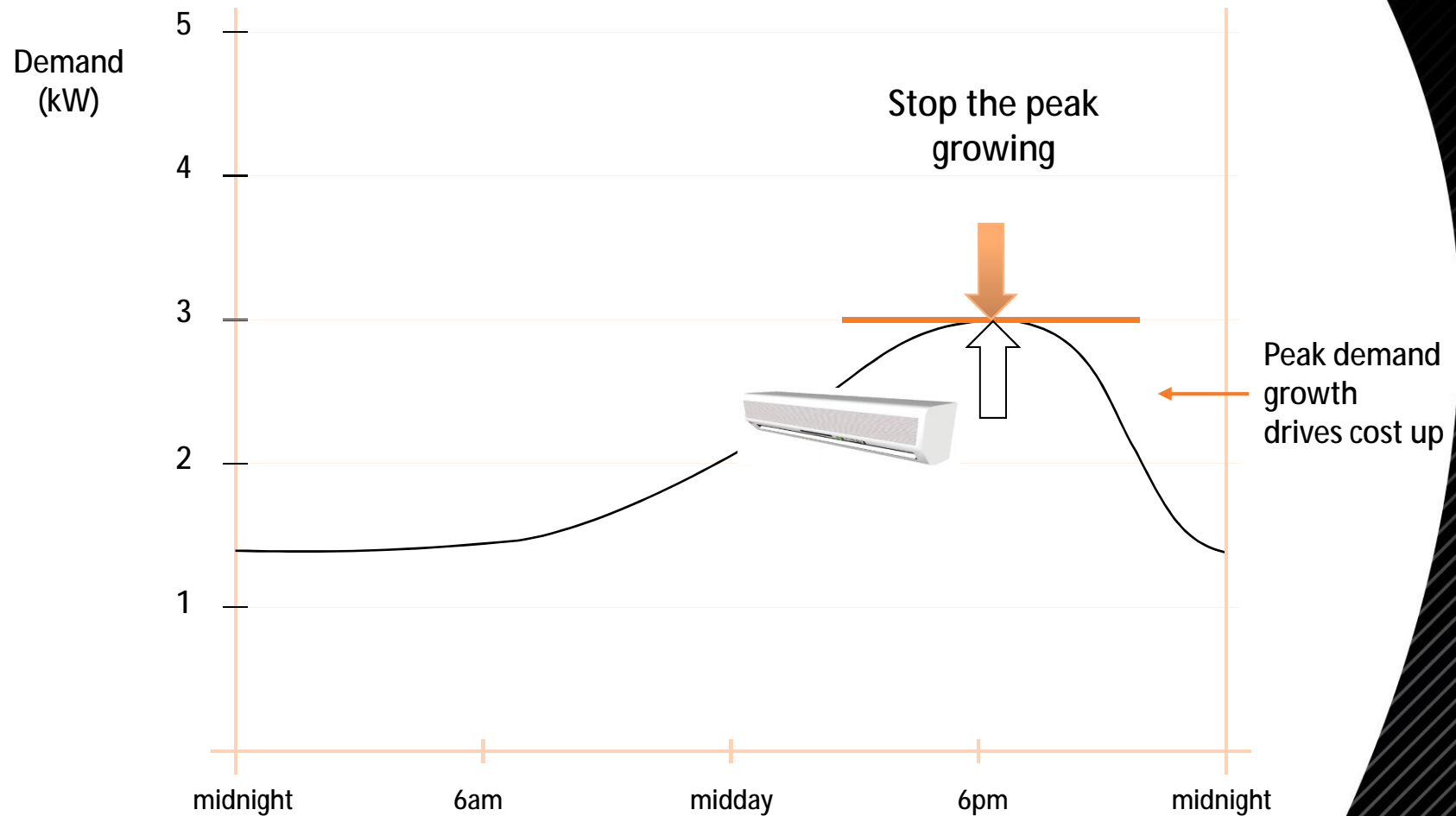
# Outline

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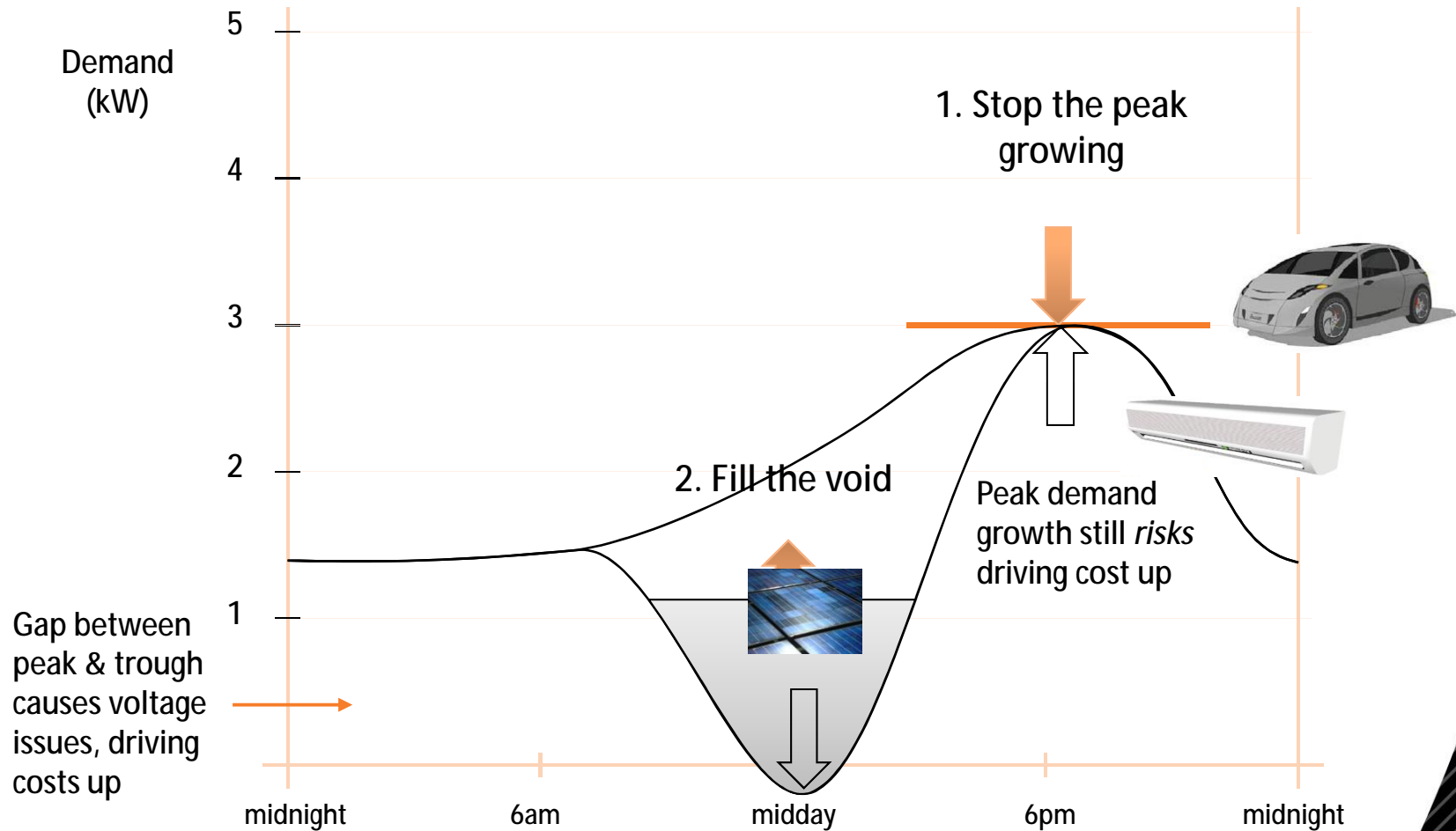
- Customer load profile & implications for distributors
- Potential responses
- Issues & opportunities
- Value?



# Yesterday's problem



# Today's problem



# But how?

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## 1. Broad based response – capacity pricing ~ \$150/kW

- Encourage reduction in peak
- Reduces cost of off-peak energy
- Likely responses
  - Move discretionary loads out of peak (pool, EV, washing)
  - Battery storage
  - Energy management systems



## 2. Broad based response – hot water (energy storage!)

- More actively promote
- Move hot water to midday
- Potentially, dynamic timing

## 3. Constrained area response – DLC incentives ~ \$500+/kW

# DLC incentives

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## Potential

- Can gain 1 – 2 kW per customer enrolled
- Incentives of \$100 - \$200/annum attractive

## However ...

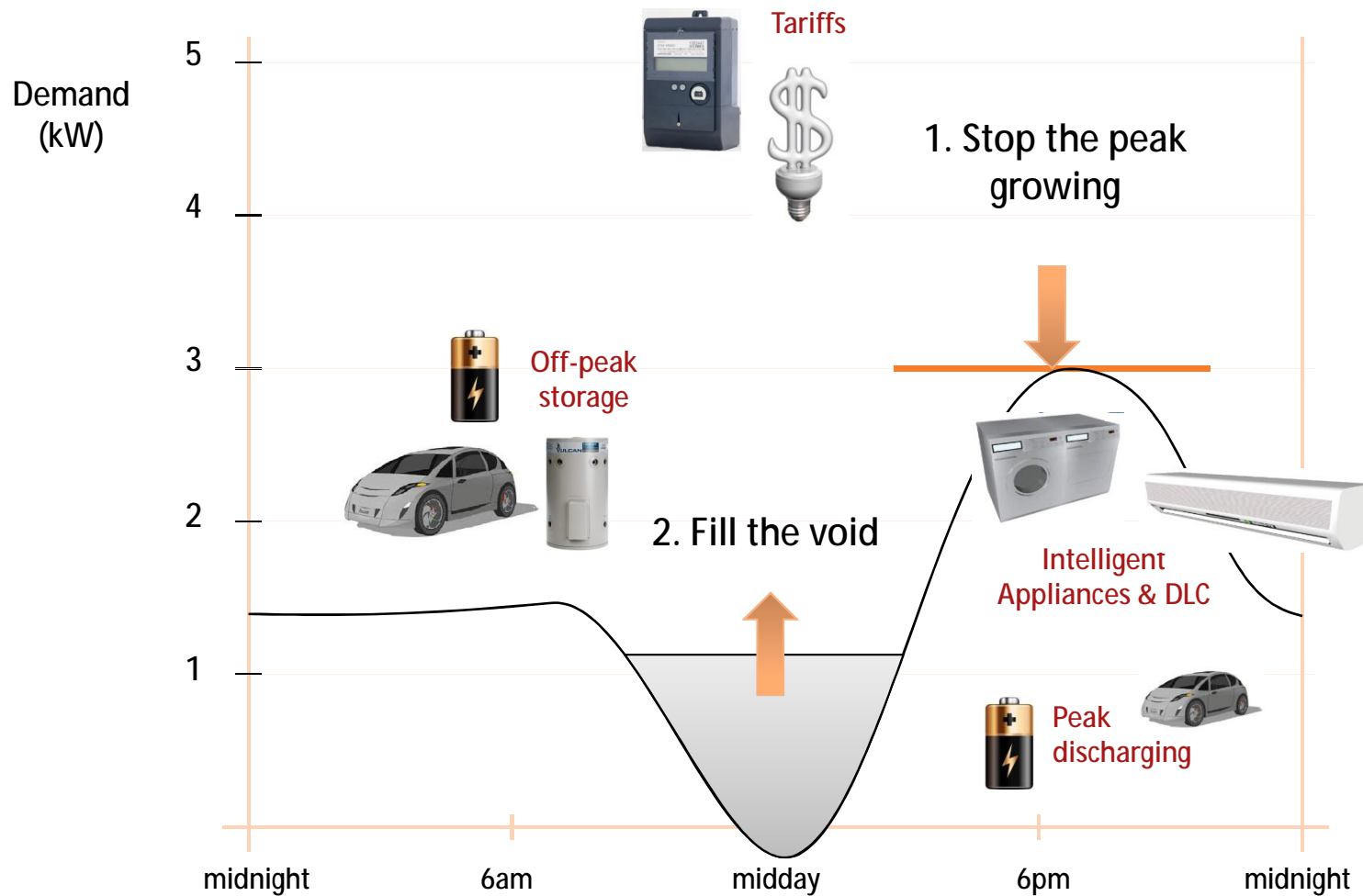
- Retrofits are high cost & can void warranty
- Communications/infrastructure costs high
- Insufficient take-up rates
- Difficulty in gaining access to full supply chain benefits

## Strategies

- Support mandate of AS4755
- Enrolment of compatible appliances
- Leverage from smart meter infrastructure
- New market demand response mechanism?



# In practice?



# Value?

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- Smart demand will continue to be a key tool for distribution businesses to gain efficiencies
- Not 'the answer' though eg. only \$50 million annual peak demand driven capex in SA
- The journey continues ...







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