Power of Choice Review

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I'll talk about:

- Two main barriers to demand management
- Incentives needed for Distribution Network Service Providers
- Role of pricing and metering
- Opportunities for demand management









Rising peak demand, worsening load factor

Summer Day - electricity demand Peak and Average Demand Days 1992 & 2011 Peak has grown 70% in 20 years. 7000 Peak days are 50% "higher" than average 6000 days (compared to 15% "higher" in 1992) 5000 4000 Summer Peak 2011 ₹ 3000 Summer Average 2011 Summer Peak 1992 2000 Summer Average 1992 1000 0 12:30 2:00 3:30 5:00 6:30 8:00 9:30 11:0012:30 2:00 3:30 5:00 6:30 8:00 9:30 11:00 AM AM AM AM AM AM AM AM PM PM PM PM PM PM PM PM



Two key barriers to demand management

1. Short term focus

- DM alternatives & supply side options developed in parallel very complex
- Three quarters of potential benefit not being counted
- Few projects viable. Over 3 years, of 86 DM screening tests, only 10 viable.

2. Disaggregated market – no way of capturing benefits across value chain

- Benefits of DM being underestimated by about 8 times.
- Makes DM far less economical for networks.





Example - Hot water load control

- Began in 1950s, when business vertically integrated
- Reduces peak demand on Ausgrid's network by 350MW
- Without this, we would have had to invest \$350 million in infrastructure
- Program would not be approved today because can't capture:
 - long term gains and
 - whole-market benefits.







Pricing

- Customers respond to price signals
- Ausgrid trialed Critical Peak Pricing
- Customers reduced peak demand use by 25% during critical peak events.
- Interval meters important for customers choice and information
- Pricing part of picture, but not whole solution





Future demand management options

- Voluntary load control programs with customers
 - eg switching off appliances at peak times in exchange for rebates
- Automated energy management systems in homes apps etc
- Payments to businesses who reduce energy use on request
- Mini power stations installed at homes and businesses
 - Distributed generation and battery storage





Conclusion

- To activate more DM in the market, distributors need incentives that:
 - Respond to benefits in the whole energy supply chain
 - Capture long and short term benefits
 - > Allow networks and consumers to share the financial benefits of DM







