DER and network regulation

AER

6 March 2019
Our presentation

• Overall thoughts
• Our experience of the energy transformation
• What does that mean for incentives?
• What have we been doing to promote efficient expenditure
• Totex pros and cons
Overall thoughts

• Efficient integration of DER into network regulation creates a range of opportunities and challenges, importantly noting that these challenges and the opportunities won’t necessarily be uniform between regions.
Our experience of the energy transformation

• DER penetration has been under way for a number of years. To date, it has not been a big driver of capex.
Our experience of the energy transformation

• Capex proposals coming to us now show an increasing focus on responding to solar-PV penetration: monitoring and addressing constraints

• There are potentially major demand drivers on the horizon (e.g. electric vehicles)

• There are related potential developments for managing supply and demand fluctuations (batteries, pumped storage, synchronous condensers etc)
Our experience of the energy transformation

• There are also a range of different directions that the overall management of DER could take

• eg passive DER vs active DER

• The rate of change of technology also heightens the risk of asset stranding- timing and value of investment is critical
Overview of DER impacts on network regulation

- **Localised network issues**
  - Power quality issues
  - Localised network capacity

- **System issues**
  - Whole of system security issues (frequency/voltage)

- **Efficiency**
  - Fringe of the grid
  - Network expenditure assessments

- **Future role of DER**
  - Provision of energy services
  - Distributed service operator

- **Consumer issues**
  - Equity
  - Reduced customer base for energy networks?

- **New energy market competition**
What does this mean for incentives?

• Greater range of options beyond traditional network-solutions; contestability and capex incentive issues

• There are conceptual and anecdotal arguments to support a conclusion of capex bias but it is very difficult to test empirically
Work we have been doing to promote efficient incentives

- Establishment of CESS and DMIS
- Binding rate of return instrument
- Changes to RITs to better accommodate non-network alternatives
- Tariff round-tables, TSSs
- Participation in steering groups (eg DEIP)
Could totex help?

• Potentially. The pros and cons depend on what type of totex model you are considering, but in general:
  
  – It can mitigate against financial drivers of capex bias;
  
  – It diminishes the materiality of differences in capitalization policies
Implications to be aware of

- Disconnects revenue from capital funding and depreciation from the economic usefulness of the assets. Could have long term implications.

- Material price impacts from the choice of ‘slow-money’ proportion, which is by nature somewhat arbitrary.
Overall

• The energy transformation heightens the importance of a framework that can accommodate flexibility in expenditure assessment and incentive mechanisms.

• We support a network regulatory framework which allows the flexibility for evolution in:
  – Assessment
  – Incentives
  – Consumer engagement in those assessment processes