Horizon Issues

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What are ‘horizon issues’?

- Regulators need to look ahead to see what issues are likely to hit them in future.
- ‘Near future’ might be a time horizon of within the next 5 years.
- We should listen to others to see what they think is coming down the track.
- What follows is a list of possible horizon issues.

Innovation and R&D

- Recently we have begun to witness a step change in the technology of electricity and gas networks
- Smart grids and smart meters will transform the involvement of the demand side
- New power generation technologies are replacing old thermal plant
- Regulators have to find ways of addressing the growing level of uncertainty of what investments are needed for the future

Data Management

- Smart grid technology and smart meters will produce a deluge of new information
- How do we ensure that distribution companies utilise this data to manage their networks more efficiently?
- Should other market participants be able to access the data so that they can offer customers new services?
- How can the data be protected?
- What role for energy regulators beyond the operations of the regulated utilities?

Major Sectoral Interrelationships

- We see greater interactions between power, gas, water and even oil and heat, particularly as power generation technologies and fuel sources change
- In many countries, the regulation of energy is undertaken by different entities from that of other utilities
- Who is watching these interactions? Should we worry about this?

Future Stability of Energy Companies

- Pattern of energy production is changing:
  - Shale in US has boosted gas
  - Climate change in EU is reducing gas
  - Fukushima reduced nuclear
  - Growth in energy efficiency potential
- These factors could undermine the financial position of some energy companies in future
- Will regulators need to act to ensure essential services continue to be provided?

Demand Side Impact on the Grid

- Smart grid technology will facilitate much greater involvement of the demand side
- Smaller customers could benefit financially from agreeing not to consume electricity at peak times thus reducing the impact on them of rising energy prices
- Should regulators facilitate these changes?

Workforce sustainability

- The workforce in energy is ageing
- Replacement skilled staff are harder to recruit in many countries
- There is a looming problem of skills shortages which could undermine the operation of energy provision
- What should regulators do?

Impact of advanced manufacturing and electrification

- Commerce and industry is becoming increasingly dependent on high technology in advanced economies
- Hi tech often needs higher quality electricity supplies – stable voltage and secure supply
- But not all users need better quality electricity supplies
- How should regulators balance the economic demands of these hi-tech high value companies against the needs of most consumers? Who should pay?

Impact of Global Events

- Recent events have had a major effect on energy markets and energy regulation.
  E.g:
  - Fukushima
  - Economic growth in Asia
  - Political instability in the Middle East
- Are there other world events which we could/should have contingency plans for?

Next Steps

- How should we as regulators take forward identifying and tackling horizon issues?
- Should ICER have a role?

Thank You

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