Negotiating the Energy Policy ‘trilemma’

Ronan Bolton and Tim Foxon
University of Leeds

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Outline

1. The Energy ‘trilemma’
2. Two recent policy changes
3. Socio-technical systems analysis

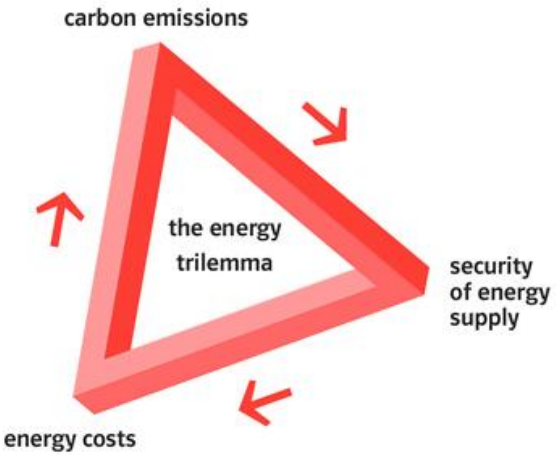
REALISING TRANSITION PATHWAYS

The energy ‘trilemma’

1. Privatisation and market liberalisation has been the dominant governance context for energy in UK since 1990s

2. Based on a ‘Regulatory State Paradigm’ (Mitchell, 2008) with on a clear market ‘logic’

- Regulator oversight but minimal direct government intervention - technology neutral approach
- Investment decisions based on market signals



3. 2000s – Emergence of energy security and decarbonisation agendas

- No clear paradigm change - Uncertain phase of ‘inter-paradigm borrowing’ (Kuzemko)

Competing framings

	'Market Liberalisation'	*'Long term transformation'*
Governance logic	• The market is the most efficient mechanism of resource allocation	• Government intervention required to meet legally binding climate change targets and ensure long term energy security
Objectives	• More efficient investment and asset utilisation	• De-carbonisation of electricity supply, electrification of heat and transport
Actors and institutional structures	• Unbundled value chain structure with clear separation between market and natural monopoly network segments and regulatory oversight	• DECC for achieving long term climate and energy policy at the national level, the CCC as an advisory body
Practical means of achieving objectives	• A regulatory framework in place which reduces the day-to-day operational costs of operating the energy infrastructure	• Setting long term targets and interim carbon budgets, policies designed to de-risk the environment for potential private sector investors

REALISING TRANSITION PATHWAYS

Case Studies

1. **Case Studies of *smart metering roll out* and *EMR* explore contemporary UK energy governance**

- Trade-offs between multiple objectives
- Uncertain rationale for policy interventions
- New actor dynamics – government and market

2. **Messy, complex and uncertain phase - need for a *socio-technical* understanding**

- New technologies, institutions, user practices, business strategies etc. – a coevolutionary dynamic (Foxon, 2011)
- System framing and analysis of interactions

3. **Insights from transition studies**

- Process of *regime* adaptation - centralised, national actors
- Hybrid central co-ordination/market rules pathway as part of a wider energy transition *action space*

Smart metering

- **National role out of smart metering to all domestic premises and small/medium commercial premises by 2020 – Rationale and design of the roll out**

(1) Market liberalisation framing in early 2000s - Metering services deregulated to promote competition between suppliers and improve efficiency of retail market – reduce transaction costs & increase switching

- However, Ofgem's market-led strategy developed in the early 2000s failed – little metering innovation

(2) Long-term transformation framing from 2008 - In Energy Bill smart metering reframed as an enabler for smart grids and decarbonisation – government intervention & national roll-out

- But multiple rationales: demand reduction, smart grid enabler, market efficiency

(3) Lock-in of elements of market liberalisation framing - Supplier-led roll out design retains significant market features

- Some have argued that a regulated/DNO led approach would be more conducive to achieving desired system objectives

Electricity Market Reform

- **Government proposals to regulate investments in large-scale low carbon generation (nuclear, CCS, renewables)**

(1) Market liberalisation framing from 1990s - Current market design favours investment in low capital cost flexible gas generation

(2) Long-term transformation framing since 2003 - Coming together of energy security and decarbonisation agendas in 2000s (Kuzemko)

- New institutional innovations imposed on market framework – Contract for Difference Feed-in Tariffs, carbon price floor, capacity mechanism, Emission Performance Standard

(3) Retention of key elements of market liberalisation framing

- Large energy companies still seen as leading investment, but complex framework and some argue that uncertainty has led to a hiatus in investment
- Mixed messages from government – Treasury v DECC
- Government intention to revert to a market selection process in the 2020s

A process of regime adaptation?

- Regime: incumbent alignment of actors, institutions & technologies in the delivery of energy services – national/centralised electricity sector

- Framing of the low carbon transition as a challenge of delivering a programme of large scale infrastructure investments

- Articulation of landscape pressures – drawing on different aspects of the 'trilemma' to legitimate this

- Will we see an *endogenous renewal*? (Smith et al, 2005)

Hybrid logics/pathways

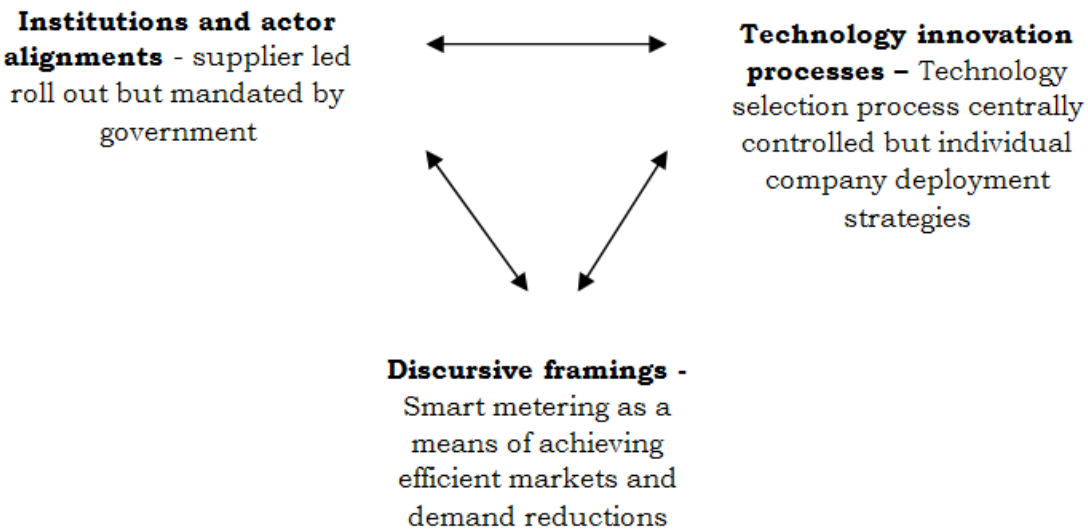
- Different low carbon pathways based on actor framings or 'logics' (Foxon, 2013)
- Three ideal type pathways developed by the Transition Pathways Consortium

  - *Central Co-ordination* "argues for a dominant role for the direct co-ordination of energy systems by national government actors to deliver energy policy goals"
  - *Market Rules* pathway follows the logic "that energy policy objectives are best achieved by market actors freely interacting within a high-level policy framework"
  - *Thousand Flowers* "energy systems should meet the needs of citizens, who should therefore take a leading role in the decisions relating to how the energy system operates" (Foxon, 2013).

  - Energy transition 'action space' – spaces where pathways coexist and overlap

  - Central Co-ordination/Market rules *hybrid* pathway – internal regime dynamic – government intervention to de-risk & coordinate large scale investments, market delivery

Process of hybridization



- Temporary or permanent?

Finally

- **3 Questions for UK energy governance going forward**

1. Regime learning or lock-in?

a) Displays some flexibility and ability to adapt, a process of learning
b) …or delaying necessary structural change?

2. Is there enough clarity in decision making and are we getting coherent policy outcomes? (Kern and Howlett, 2009)

a) Mixed policy objectives may help to create consensus and coalition building
b) …may create instability and diminish confidence and trust in long term objectives - Do we need a clear hierarchy of objectives?

3. How can we open up the 'action space' to a more diverse set of actors?

a) Improve process, participation and open up to wider action space (UEA)
b) Untapped innovation potential in wider civil society (Adrian Smith)

Thank You!!

Ronan: eerpgb@leeds.ac.uk
Tim: t.j.foxon@leeds.ac.uk