

University of Warwick institutional repository: <http://go.warwick.ac.uk/wrap>

A Thesis Submitted for the Degree of PhD at the University of Warwick

<http://go.warwick.ac.uk/wrap/48684>

This thesis is made available online and is protected by original copyright.

Please scroll down to view the document itself.

Please refer to the repository record for this item for information to help you to cite it. Our policy information is available from the repository home page.

*UK Energy Governance in the Twenty-first Century:
Unravelling the Ties that Bind*

Caroline Kuzemko

*A thesis submitted in October 2011 in partial fulfilment of the requirements for the
degree of*

Doctor of Philosophy

*Politics and International Studies
University of Warwick*

I hereby declare that this thesis has not been, and will not be, submitted in whole or in part to another University for the award of any other degree.

Signature:

Caroline Kuzemko

Table of Contents

List of Tables

Glossary of Terms

Acknowledgements

Abstract

Thesis Introduction: Energy Governance and Change **p. 14**

1. Energy, Paradigms and Change
2. Contributions to Knowledge, Hypothesis and Research Questions
3. Methodology
4. Brief Thesis Outline

Chapter 1:

Perspectives on Energy, Governance and Change **p. 30**

Introduction

1. The Liberal-Geopolitical Debate *p. 32*

- 1.1 Brief Definition: the Pro-market Perspective
- 1.2 Energy in the 2000s: Events and Pro-market Interpretations
- 1.3 Crisis Response and Policy Recommendations: More of the Same?

2. The 'Geopolitical' Perspective *p. 39*

- 2.1 Brief Definition: Geopolitics, Energy and Power
- 2.2 Energy in the 2000s: Events and Geopolitical Interpretations
- 2.3 Crisis Response and Policy Recommendations: Energy and the State

3. Climate Narratives *p. 44*

- 3.1 Brief Definition: Critique and Change
- 3.2 Energy in the 2000s: Events and Climate Interpretations
- 3.3 Climate Responses to Crisis Perceived as Endogenous to Energy

Governance

4. Energy, Paradigms and Structural Change *p. 49*

- 4.1 The Paradigm Come Back
- 4.2 Policy Paradigm Change

Conclusions *p. 54*

Chapter 2:	
Conceptualising Energy Governance Practices and Change	p. 55
<i>Introduction</i>	
1. <i>Policy Paradigms and Ideas</i>	<i>p. 56</i>
1.1 Policy Paradigm as Interpretive Framework	
1.2 Legitimacy, Belief and Strategic Language	
2. <i>Depoliticisation and Physical Structures of Governance</i>	<i>p. 61</i>
2.1 Depoliticisation as Institutionalisation	
2.2 Governance Institutions	
2.3 The Five Constituent Levels of the PEPP	
3. <i>Crises, Insecurity and Repoliticisation: Why Change Commences</i>	<i>p. 68</i>
3.1 Temporal Aspects of Governance Change	
3.2 Shocks, Perceived Crises and Security	
4. <i>Crisis Narratives: How Profound Change Takes Place</i>	<i>p. 73</i>
4.1 Narratives in Times of Crisis: ‘What Has Gone Wrong’	
4.2 Ideas, Narratives and Seeking Solutions: ‘What is to be Done’	
<i>Conclusions</i>	<i>p. 80</i>
Chapter 3:	p. 82
The Pro-Market Energy Policy Paradigm: Historical Context, Ideas and Institutionalisation	
<i>Introduction</i>	
1. <i>British Energy Politics under Keynesianism</i>	<i>p. 83</i>
1.1 Domestic Energy Policy under Keynesianism	
1.2 Energy, International Relations and Foreign Policy	
1.3 1970s ‘Oil Shocks’: Energy and Crisis	
2. <i>The Evolution of the PEPP: Ideas about Energy and Governance</i>	<i>p. 90</i>
2.1 The Path of ‘Radical Reaction’	
2.1.1 Political Protagonists	
2.1.2 ‘What has Gone Wrong’ and ‘What is to be Done’	
2.2 Ideas about Energy and its Governance	
2.2.1 Ideas about Energy	
2.2.2 Ideas about Energy Governance	
3. <i>The Making of the PEPP: Ideas and Political Practice</i>	<i>p. 98</i>
3.1 ‘Normative Neoliberalism’ and Energy	

3.2 Restating the Goal(s) of Energy Policy	
3.3 Instruments of Energy Policy	
3.4 Physical Structures of Governance	
4. <i>Overcoming Challenges to Neoliberal Energy Governance</i>	<i>p. 109</i>
4.1 Coal and the National Union of Mineworkers	
4.2 Alternative Narratives Challenge the Institutionalisation of the PEPP	
<i>Conclusions</i>	<i>p. 114</i>
Chapter 4:	p. 116
The Pro-Market Energy Policy Paradigm 2000-3: Challenge and Compromise	
<i>Introduction</i>	
1. <i>New Labour, Normalised Neoliberalism and the Internationalisation of Pro-Market Energy</i>	<i>p. 117</i>
1.1 Labour in Opposition	
1.2 The PEPP in 2000: Energy and Domestic Energy Governance	
1.3 The PEPP in 2000: Foreign Policy and International Relations	
1.4 The PEPP in 2000: Climate and Renewable Energy Policy	
2. <i>Emerging Challenges for Energy Policy</i>	<i>p. 130</i>
2.1 Mounting Challenges	
2.2 Concerns about Climate Policy	
3. <i>The Performance and Innovation Unity (PIU) Energy Review 2002</i>	<i>p. 136</i>
3.1 The PIU Energy Review: Challenging the PEPP	
3.2 The PIU Energy Review and Signs of Continuity	
3.3 Competing Narratives within the PIU and Beyond	
4. <i>'Our Energy Future: Creating a Low Carbon Economy': 2003 White Paper</i>	<i>p. 142</i>
4.1 The New Objectives of Energy Policy	
4.1.1 Cut Carbon Dioxide Emissions	
4.1.2 Ensure Every Home is Adequately and Affordably Heated	
4.2 The UK's Fuel Mix Projections	
4.3 UK Foreign Policy and the Liberalisation Agenda	
4.4 Suppliers and Diversity	
<i>Conclusions</i>	<i>p. 154</i>

Chapter 5:

The Energy Weapon, Russia and the Repoliticisation of Energy: 2004-7 p. 156

Introduction

1. *The UK Security of Supply Crisis: Geopolitical Narratives Re-Emerge* p. 157

1.1 The Russian Federation and Energy Governance Change

1.2 The ‘Third Age of Energy Security’

2. *Geopolitical Narratives in Elite Political Circles* p. 168

2.1 UK Elite Narratives

2.2 The European Energy Debate

2.3 Public and Political Debate and ‘Re-Thinking’ Energy

3. *UK Energy Governance: Change* p. 175

3.1 Re-Focus Objectives: Security and Climate Change

3.2 Planning the UK Fuel Mix and Indigenous Supplies

3.3 Protectionist Practices

4. *UK Energy Governance: Continuity* p. 183

4.1 Neoliberal Perspectives and the ‘International Energy Strategy’

4.2 Neoliberal Perspectives and the Russian Federation

4.3 Climate Change Objective but Consistent Methods of Delivering

Conclusions p. 187

Chapter 6:

Unravelling the Ties that Bind: 2008-10 p. 189

Introduction

1. *Problems Endogenous to the Pro-Market Governance System* p. 190

1.1 Mounting Evidence of Failure: Energy Security Critique

1.2 Mounting Evidence of Failure: Climate Focused Critique

1.3 Narrative Appropriation: the Energy-Security-Climate
Narrative Develops

2. *‘Re-Thinking Energy as a Continuing Process* p. 199

2.1 ‘Re-Thinking Energy: Physical Institutions of Governance

2.2 The 2008 Energy and Climate Change Acts

2.3 New Organisations

3. *The New Energy Department and Elite Narrative Changes* p. 207

3.1 The Department of Energy and Climate Change (DECC)

3.2 Elite Narrative Changes

4. <i>Governance Outcomes of ‘Re-Think to May 2010</i>	<i>p. 213</i>
4.1 Policy Documents and Legislation	
4.1.1 The Low Carbon Transition Plan	
4.1.2 Renewable Energy Policy	
4.1.3 Gas Policy Statement	
4.1.4 The Energy Bill	
4.2 The Process of ‘Re-Think’ and Continuing Uncertainty	
4.3 The Energy Governance Structure 2010	
<i>Conclusions</i>	<i>p. 221</i>
Chapter 7:	
The Complex, Uncertain and Lengthy Evolution of Change	p. 223
<i>Introduction</i>	
1. <i>Challenge and Resistance: 2000-3</i>	<i>p. 224</i>
1.1 Embedded Paradigms and Inertia	
1.2 ‘Technocratic’ Depoliticisation and Institutional Mandates	
1.3 Deskillling and ‘Deliberative’ Depoliticisation	
1.4 Theoretical and Other Implications	
2. <i>Repoliticisation and ‘Re-Thinking’ Energy: 2004-7</i>	<i>p. 237</i>
2.1 Uncertainty and Anomalies	
2.2 Speaking Security, Repoliticisation and Political Interest	
2.3 Public Interest and Political Action	
2.4 ‘Re-Thinking’ Energy and Change as Process	
3. <i>Unravelling Ties: 2007-10</i>	<i>p. 247</i>
3.1 The Energy Security-Climate Narrative	
3.2 Other Drivers of Change	
3.3 Necessary Conditions for Paradigm Change	
<i>Conclusions</i>	<i>p. 257</i>
Thesis Conclusion: Questions, Answers, Concepts and Possible Futures	p. 260
<i>Introduction</i>	
1. <i>Answering Questions and Conceptual Implications</i>	<i>p. 260</i>
1.1 Defining and Measuring Change	
1.2 Policy Paradigms, Depoliticisations and Resistance to Change	
1.3 Speaking Security and Repoliticisation	

1.4 The Further Role of Narratives in Processes of Change	
1.5 Further Conceptual Insights	
2. <i>Possible Futures</i>	<i>p. 277</i>
3. <i>Final Reflections</i>	<i>p. 280</i>
Bibliography	p. 282
Appendix: List of Interviews, Private Conversations and Conferences	p. 326

List of Tables

Table 1: The Five Constituent Levels of the Pro-Market Energy Policy Paradigm (PEPP)

Chapter 2, p. 67

Table 2: UK Energy Sector Nationalisation and Privatisation Schedule 1947-96

Chapter 3, p. 104

Table 3: The Pro-Market Energy Policy Paradigm in 2000

Chapter 4, p. 118

Table 4: The New Energy Governance Structure 2010

Chapter 6, p. 221

Table 5: Processes of Energy Governance Change: 2000-10

Chapter 7, p. 258

Table 6: Types of Depoliticisation

Thesis Conclusion, p. 269

GLOSSARY OF TERMS

ASEAN	Association of Southeast Asian Nations
BBC	British Broadcasting Corporation
BERR	Department for Business Enterprise and Regulatory Reform
BP	British Petroleum
CCL	Climate Change Levy
CCPR	Climate Change Programme Review
CBI	Confederation of British Industry
CEPMLP	Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee
CERA	Cambridge Energy Research Associates
CT	Carbon Trust
CTFC	Commodity Futures Trading Commission (US)
DEFRA	Department for Environment, Farming and Rural Affairs
DoE	Department of Energy
DECC	Department for Energy and Climate Change
DETR	Department for the Environment, Transport and the Regions
DSOs	Departmental Strategic Objectives
DTI	Department for Trade and Industry
CCC	Committee on Climate Change
CCS	Carbon Capture and Storage
CFC	Chlorofluorocarbon
ECT	Energy Charter Treaty
EC	European Commission
EU	European Union
EU ETS	European Union Emissions Trading Scheme
EU 20-20-20	The European Union Climate and Energy Package 2007
FAC	Foreign Affairs Committee
FCO	Foreign and Commonwealth Office
FDI	Foreign Direct Investment
FiT	Feed-in-Tariff
FFL	Fossil Fuel Levy
GATT	General Agreement on Tariffs and Trade
G7	Group of Seven

G8	Group of Eight
HMG	Her Majesty's Government
IEA	International Energy Agency
IGOs	Inter-Governmental Organisations
IMF	International Monetary Fund
IOCs	International Oil Companies
IPE	International Political Economy
IPPR	Institute for Public Policy Reform
ITPOES	Industry Taskforce on Peak Oil and Energy Security
JESS	Joint Energy Security of Supply
MP	Member of Parliament
NOCs	National Oil Companies
NUM	National Union of Mineworkers
NFFO	Non-fossil Fuel Obligation
NGOs	Non-Governmental Organisations
Offer	Office of Electricity Regulation
Ofgas	Office of Gas Supply
Ofgem	Office of the Gas and Electricity Markets
OECD	Organisation for Economic Co-operation and Development
OPEC	Organisation of the Petroleum Exporting Countries
ORED	Office for Renewable Energy Deployment
PdVSA	Petroleos de Venezuela S. A.
PEPP	Pro-Market Energy Policy Paradigm
PIU	Performance and Innovation Unit
PSA	Production Sharing Agreement (Russian Federation)
PSAs	Public Service Agreements (United Kingdom)
RAE	Royal Academy of Engineering
RECs	Regional Energy Companies
RPI	Retail Price Index
RO	Renewables Obligation
RSP	Regulatory State Paradigm
RCEP	Royal Commission on Environmental Pollution
SDC	Sustainable Development Commission
SSECC	Secretary of State for Energy and Climate Change
UK	United Kingdom

UKCS	United Kingdom Continental Shelf (North Sea)
UN	United Nations
US	United States of America
UNCHE	United Nations Conference on the Human Environment
WB	World Bank
WTO	World Trade Organization
WWII	World War Two

Acknowledgements

A great friend once told me that writing a PhD thesis was ninety percent sweat and only ten percent inspiration. I remember thinking, but without giving it much real consideration, that that sounded about right. But it was not until I had experienced the very specific values of that sweat that I came to properly appreciate what the advice meant. I have had to develop discipline, mental dexterity, how to switch from discussing ‘Bob the Builder’ with my daughter to contemplating processes of ‘speaking security’, and patience with myself, particularly during the many periods where it seemed all sweat and zero inspiration.

All this would have been so much less possible without certain people, not least Ed and Isobel for their love, support, laughter and for helping me to get everything back into perspective.

My supervisors, Mat Watson and Chris Browning, have been exemplary – I could not have asked for more from them. I aspire to their professionalism, integrity and academic insight. I also owe a huge amount of gratitude to Catherine Mitchell who has provided me with ideas, information, contacts, feedback and a friendly, and exceptionally well-informed, ear. The PEEER network, and especially Andreas Goldthau, has provided a great deal of intellectual stimulus, a forum for discussion, and essential feedback on my work. I would also like to thank the ESRC for so generously funding the network.

There is a long list of others who, through informal chats, requests for help and good luck wishes, have served to support and inspire this work. Not least Diane Stone, Richard Higgott, Mark Blyth, Colin Hay, Andrew Monaghan, Michael Keating, Florian Kern, Caroline Kennedy-Pipe, Ben Richardson, Andrei Belyi, Roy Allison, Lena Rethel, Ed Page, Graham Timmins, Tim Shaw, Craig Oliphant and Richard Sakwa.

I would also like to thank everyone who gave me of their precious time for the interviews which have done so much to support the writing of this thesis.

This thesis is dedicated to Peter Simpson, and to Kerry.

Caroline Kuzemko, Kenilworth, 31st August 2011

Abstract

Repeated claims have been made since the early 2000s that UK energy, and its governance, is ‘in transition’. In this thesis it is argued, using a conceptual framework informed largely but by no means exclusively by ideational institutionalism, that although UK energy governance, policy and associated institutions have been undergoing a period of continuous crisis, challenge and change, a policy paradigm shift cannot as yet be claimed. This is because UK energy governance processes have not fully rejected some of the ideas upon which the ‘pro-market’ system was founded in the early 1980s, and due to a lack of credibility in alternative frameworks and solutions. Governance practices do, however, appear to show tendential signs of policy paradigm change. This process of change has been initiated largely in response to public and political concerns about the security of energy supplies, which emerged in the mid 2000s, in addition to growing political support in the UK for measures to mitigate climate change. To the extent that any new ‘norms’ can be claimed it is suggested here that the emergence of an ‘energy-security-climate nexus’ in energy governance processes is of particular significance. This nexus reflects the appropriation of the idea that domestic energy production is more ‘secure’ by climate change protagonists looking to encourage support for increased renewable energy production in the UK. It also reflects a long-standing climate idea that decisions about energy and climate policy should be reached through inter-linked processes.

This thesis provides an analysis of change and continuity in UK energy governance from 2000 to 2010 with a particular emphasis on the various ideas, about both energy and its governance, that have informed policymaking as well as the alternative narratives which have called for changes. The thesis is informed empirically by a range of policy documents, including White Papers, Acts, reports and formal reviews, presentations by policy-makers and analysts, and secondary literature. This material has been crosschecked against a limited number of unstructured interviews with policymakers, analysts, consultants and Government advisors. Academic, media, think-tank and other third party literature has also been used to inform and construct those narratives which have, over this period of time, presented critiques of and alternatives to the ‘status quo’ in energy policymaking.

Thesis Introduction: Energy Governance and Change

The subject of this thesis is energy governance in the United Kingdom (UK) from the year 2000 to 2010. Various claims have been made, both within academia and within elite political circles, about UK energy policy and change over this time period. Prime Minister Blair declared in 2003 that energy policy was undergoing “profound change” (Blair in DTI 2003: 3), one prominent Government energy advisor and academic has claimed that a “new energy policy paradigm” came into existence around the start of the 2000s (Helm 2005a and 2007a), and various energy policy documents refer to energy being “in transition” (DECC various). These all imply that profound changes to UK energy policy have already occurred. By contrast, however, there are those, often but not exclusively from a climate change background, who claim that UK energy policy has proven remarkably resistant to change over the course of the first decade of the 21st century (Rutledge 2007; Mitchell 2008; Kern 2009; Scrase et al 2009).

These questions of profound change, often with reference to the terminology of paradigms and paradigm change, are complex and difficult to assess, particularly given the range of theoretical perspectives that tend to colour both analysis and conclusions. The complexity of these questions is also apparent in that energy ‘transition’ is routinely used to refer to movement toward a low or zero-carbon energy system, whereas other analyses of energy policy change focus more on questions of the role of the state within processes of policymaking.

Questions surrounding the supply, use, and consequences of use, of energy have been subject to political involvement in Britain since Edward I’s ruling that wood should be burnt for heating purposes, to avoid the pollution caused by burning coal (Ezra 1983: 1). During the course of the last century or so Western nations in particular have become increasingly reliant on various inanimate energy sources to power those technologies that have underpinned industrialisation, modernisation and, in some instances, prosperity. As such energy, and its supply, has over time become a core, if not always overtly recognised, aspect of ‘modern’ economic and social life as well as a more clearly defined subject for politicians and academics. Historically, as is common in other areas of research, there have been varying ideas, both between and within nations, about how energy should be governed, accessed and what socio-economic role it plays.

What is further historically evident is that energy, an issue of international if not global proportions, has, over the course of the last century, been a highly politicised and contested area within which there has been little international political agreement, despite a growing number of attempts to build global and inter-regional governance regimes.¹ For example, although the General Agreement on Tariffs and Trade (GATT) provides rules and norms for a large number of traded ‘goods’ there is also a specific article (XX) which allocates trade exemptions to sectors which producer nations consider to be their ‘natural resources’ (Behn and Pogoretskii 2010). As such large exporters of fossil fuels, such as Saudi Arabia, have been able to join the World Trade Organisation (WTO) without needing to extend GATT rules to their national resource sectors. This relative lack of international, or global, governance framework might be taken as a reflection of the still existent differences in political approaches to energy, particularly between Western consumer and non-Western producer nations.

It is interesting, within this historical context, to note the degree to which the UK had placed its energy eggs in the basket of progressing the international marketisation of energy. Britain was an early mover in energy sector privatisation, liberalisation and in attempts to open the sector up to the forces of competition. By the year 2000 UK energy governance seemed, despite some opposition from climate campaigners in particular, to be largely depoliticised with governance practices deeply embedded within a ‘pro-market’ framework. This framework had been put in place during the large-scale privatisation and liberalisation programme undertaken by the Conservative Government of the 1980s but had been further consolidated under New Labour. In 2000, moreover, energy policymaking was the responsibility of the Department of Trade and Industry (DTI), as there was no Department for Energy, and it was still largely distinct from climate policy.²

By contrast by 2010 a number of changes had, indeed, been made. A new Department for Energy and Climate Change (DECC) had been established, energy and climate

¹ There have, since the inception of the European Coal and Steel Community in 1951, been a number of attempts to develop a co-ordinated approach to the handling of energy supply within Europe, such as the Common Energy Policy (CEP), none of which have proven particularly effective or conclusive (McGowan 2008: 93)

² The UK did have some carbon dioxide reduction targets, but responsibility for meeting these lay largely with the Department for the Environment, Food and Rural Affairs (DEFRA).

policy were becoming inter-twined in governance practice, and the state was starting to take a larger role in energy policy-making and investment processes. Energy policy was being, by 2010, formulated with firm, legally binding, climate objectives in mind. These are, no doubt, significant changes but the question remains whether they constitute, as claimed, a policy paradigm shift. The notion of “paradigm shift”, often used with reference to Thomas Kuhn’s early work on scientific paradigms (Kuhn 1962), implies a clear break with previous practices as an alternative, and often opposing, system comes to replace existing frameworks.

This question is highly important to answer for a number of reasons. Firstly, the UK energy governance structure, characterised in this thesis as ‘pro-market’, has been widely held up as a ‘model’ system which other countries, seeking to reform their energy systems, should follow (IEA 2006: 9; see also Oliviera and MacKerron 1992; Thomas 2006; Jegen 2009; cf. Interview 15). The UK has, in addition, been one of the most vocal advocates of energy marketisation on an international basis, particularly within the EU and Russia, and considers itself to have been influential over recent EU liberalisation processes (Davies 1996; DTI 1998a; Helm 2003; FCO et al 2004; Timmins 2006; Jegen 2009). Many in the UK, and elsewhere, are convinced that processes of liberalisation have directly allowed for lower costs to consumers over time. A wide number of countries, often encouraged by Intergovernmental Organisations (IGOs), such as the World Bank (WB) and the International Energy Agency (IEA), have over time sought to restructure their energy sectors along UK ‘pro-market’ lines (Thomas 2006: 583; Jegen 2009: 1; Lesage et al 2010: 6; EC 2011: 14). As such any serious break with, and or rejection of, the pro-market system might have serious international and political implications.

The UK Government by claiming that it is transitioning energy to a low-carbon system has left itself open to measurement against this goal, and potentially critique, if not achieved. The UK has furthermore claimed leadership in international attempts to secure climate agreement. If, however, it cannot reduce its own, domestic carbon emissions this may well have implications for its international negotiating position. Failure to produce a low-carbon energy system by a country claiming leadership in the complex and difficult battle to reduce global emissions might, in addition, engender particular inferences for some about the achievability of climate change mitigation.

1. Energy, Paradigms and Change

This thesis on UK energy governance and paradigm change is situated most directly within the literature, referenced above, which deals with questions of energy paradigms and change. This small, but growing, body of work is situated in turn within the context of a wider literature on energy, governance and politics which has, over time, rarely departed from one of two sets of theoretical lenses, either geopolitical or (neo)liberal. Indeed, a recent review of European energy governance literature has suggested that the “...markets versus geopolitics...” debate is still “...state of the art...” (Youngs 2009; cf Correlje and van der Linde 2006; Finon and Locatelli 2008; Luft and Korin 2009). This dichotomy within the literature has served to somewhat narrow what kinds of questions are asked about energy governance and possibilities for change. This thesis is rooted not only in allowing for conceptual variety, but furthermore in understanding what role different perspectives have been playing in changes to UK energy governance so far in the 21st century.

Common International Political Economy (IPE) questions about states and markets, as well as environmental questions about how to mitigate climate change, have also been under-represented in the energy literature.³ The lively debate, which had taken place in the 1980s, about the role of the state in UK energy governance fell away over the course of the 1990s as neoliberal, and rational choice, ideas started to assume a position of both academic and elite political ‘orthodoxy’ (cf. Yergin 1998; Egenhofer and Legge 2001; Hayes and Victor 2006; Maugeri 2006). So much so that the ‘pro-market’ energy governance system, established by the Conservative Administration starting in the early 1980s, became less open to question and to an extent reified. Energy policy was researched, but largely with problem solving, in Coxian terms (Cox 1981), in mind (cf. CEPMLP 2006). The debate about climate change, however, continued steadily through the 1990s and early 2000s, albeit that section which challenged and critiqued

³ Although there is a tradition of IPE research into subfields, such as the environment, energy as a subject is strongly under-represented. Only a small number of, albeit high profile, academics working within, and in some instances to establish, IPE have extended their research to questions of energy and its governance (Keohane 1984; Strange 1988; Bromley 1991). Some IPE textbooks have explicitly dealt with energy issues, but in the limited context of oil crises, oil cartels, and associated questions of conflict and power (Gill and Law 1988; Stubbs and Underhill 1994; Spero and Hart 1997).

existing energy policy was largely marginalised, or compromised, within elite political circles (Jacobs 1991; Carter 2001; Bernstein 2001; Dryzek 2005). This thesis will address specifically questions about the state and the market in UK energy governance as well as that of how energy and climate policy have come to interact over time.

This is where we return to the literature on energy, paradigms and change. This literature explicitly recognises that there have been some quite consistent approaches to energy trade and politics over the past twenty or thirty years, but that these structured processes are open to change (Stanislaw 2004 and 2006; Helm 2005a and 2007a; Yergin 2006; Gonzales 2006; Clarke 2007; Klare 2008a; Mitchell 2008; Nuttal and Manz 2008; Froggatt and Levi 2009; Jegen 2009; Kern 2009). Analyses referring to, varying types of, energy paradigms have tended to not to pose specific questions about how energy is governed whilst also tending to generalise across large regions, or globally (Stanislaw 2004 and 2006; Yergin 2006; Gonzales 2006; Clarke 2007; Klare 2008; Nuttal and Manz 2008; Froggatt and Levi 2009). Rarely within this literature are paradigms, or what constitutes paradigm change, clearly or rigorously defined. The marked exceptions being Catherine Mitchell's book on UK sustainable energy policy and Florian Kern's thesis on Dutch and UK energy innovations policy (Mitchell 2008; Kern 2009). Both these works however provide definitions of paradigms, with a particular focus on the ways in which they have constrained change, but not of paradigm change and *why* and *how* it can take place.

Amongst these analyses there are a few papers and books that have considered UK energy governance processes specifically (Helm 2005a and 2007a; Rutledge 2007; Mitchell 2008; Kern 2009; Rutledge and Wright 2011). These analyses all suggest that the UK energy policy paradigm has been one largely influenced by neoliberal ideas about privatisation, deregulation, cost efficiency and competition over a period of decades. As already suggested, however, very different conclusions have been reached about profound change to this 'pro-market' energy paradigm. In fact, amongst those academics writing on energy policy only one has gone so far as to claim a paradigm shift (Helm 2005a and 2007a). Although Rutledge and Wright entitle their book "UK Energy Policy and The End of Market Fundamentalism" the chapters in it are more focused on elucidating the great many challenges to current energy policy practices perceived by the authors (Rutledge and Wright 2011). Rutledge, Mitchell and Kern, conversely, all conclude that UK energy policy has remained remarkably closed to

alternative ideas about how to govern energy, despite the need to do so in order to facilitate new climate and energy security objectives (Rutledge 2007; Mitchell 2008; Kern 2009). Mitchell suggests that "...it is far easier for Government to do nothing than it is to make change..." (Mitchell 2008: 14).

This small literature on UK energy policy paradigms although it overtly acknowledges that ideas are important to energy policymaking still leaves a range of questions unanswered. All deal in some way with UK energy governance but only two pieces, a journal article and an edited volume, are specifically focused on energy, if not on climate, policy (Rutledge 2007; Rutledge and Wright 2011). Mitchell is concerned with sustainable energy policy (Mitchell 2008), Kern with innovations policy (Kern 2009) and Helm with OECD energy policy (Helm 2005a and 2007a). This thesis analyses not just UK energy policy, including objectives and instruments, but also other structures of governance by including in its characterisation of energy governance, as of the year 2000, interpretive frameworks as well as physical institutions of governance, such as Government Departments and independent regulatory bodies. In this way the combined structures of UK energy governance, referred to as the 'pro-market' energy policy paradigm' (PEPP), will represent a broad, but complex and inter-related, governance system.

2. Contributions to Knowledge, Hypothesis and Research Questions

The hypothesis underpinning this thesis is that UK energy governance has entered a process of change which may, or may not, result in a paradigm shift away from the existing 'pro-market' energy policy paradigm. The principal question, therefore, that this thesis seeks to answer is whether or not ongoing changes to UK energy governance can be understood as profound or not and the degree to which they represent a break from the past. This work distinguishes itself from the current literature on paradigms and shifts in energy in that it defines clearly and in detail what is meant by a policy paradigm and by paradigm shift. By doing so this thesis also suggests that policy paradigm theory, and associated concepts that can assist in providing contextual explanations of consistency and change, can reveal much about UK energy governance in the twenty-first century so far.

Change is understood here as a relative concept (cf. Hay 1999c: 30), and this brings us to the second question which this thesis seeks to pose, which is about the *kind* of energy governance system that existed at the start of the period of analysis, the year 2000. One way in which change can be measured is in relation to what has gone before both in terms of degree and type of change. By providing an in depth definition of UK energy governance as of 2000, and on a number of different levels, this thesis has been able to offer a detailed picture against which to measure change, particularly in terms of profundity. It should also be noted that within the literature on paradigms and paradigm shift judgements made about degree of change can also be related, to a large extent, to normative positions taken on what kind of change *should* happen. To the extent that it is possible, therefore, the principal research question of this thesis will be posed with no normative agenda in mind with regard to what energy governance *should* entail.⁴

Again, as suggested above, utilising a conceptual framework that draws on a range of explanatory devices has also enabled this thesis to provide for measurement in terms of the *type* of change that is taking place. If energy governance structures in 2000, characterised as the PEPP, can be explained as reflecting certain sets of ideas within particular political practices, then energy governance in 2010, can be measured in terms of how the structures of governance differ in comparison. The degree to which the PEPP can be seen as both willing and able to resist change can be understood as one implication of the particular assumptions underlying policy (cf. Greener 2001: 133) and the particular ways in which they have been implemented.

Policy paradigm theory (Hall 1993; see also Hall and Taylor 1996; Campbell 1998; Hay 2001 and 2004; Greener 2001; Blyth 2002; Oliver and Pemberton 2004; Larsen and Andersen 2009) in application to UK energy governance has produced a picture of an embedded and ideationally quite static system. It has also helped to explain the ways in which the PEPP could pursue ‘business-as-usual’ policies even in the face of growing political support for climate change mitigation under New Labour. Peter Hall in particular has explained this type of occurrence by suggesting that deeply embedded policy paradigms can tend to throw old policies at new problems based on belief in existing structures and a lack of conceivably credible, alternative solutions (Hall 1993: 280). This thesis has suggested that the PEPP, and those political protagonists which

⁴ Emphases author’s own.

supported it, were able to see off challenges and alternative ideas about what should be done partly through the marginalisation of ideas, but also by adopting various compromise positions over time (cf. Bernstein 2001).

One more way in which this thesis might be understood as making a contribution to the literature has been the inclusion of physical institutions of governance within the characterisation of the PEPP, and how they can be understood as being constitutive of a certain range of outcomes. Policy paradigm theory is, of course, very much focused on policymakers as actors, and the ways in which their actions and decisions can be constrained. Catherine Mitchell also places some emphasis on the ways in which certain government institutions, particularly the Office of the Gas and Electricity Markets (Ofgem), have worked to resist change over time (Mitchell 2008). This thesis uses understandings implicit in concepts of depoliticisation in order to explain in more detail how such physical institutions of governance have served to resist change. It will also be argued that processes of depoliticisation, reflecting as they have certain ideas about appropriate roles for the state in energy governance, can be understood as a method through which the PEPP became embedded institutionally over time.

This is not, however, to say that marginalisation, cognitive boundaries and compromise can necessarily continue to drown out alternative ideas about energy governance *ad infinitum*. Without understanding clearly, however, how policy paradigms are institutionally pre-disposed to offer up resistance to change the significance of change, when it finally does happen, might otherwise be under-estimated. This is where we turn to the third question posed by this thesis which explores *why* change has been taking place. As such, this thesis is not only concerned with measuring type and degree of change but with analysing in depth why, in what circumstances, change has taken place.

Again, this approach can be interpreted as a contribution to the literature on energy paradigms and paradigm shift in that change is not only defined, but also understood, as a complex *process* unfolding unevenly over time. In approaching the question of why change became possible notions that widely perceived crises can provide political impetus for change (Hay 1996 and 2001; Blyth 2002; cf. Mahoney 2000) have been reinforced with notions, from the Copenhagen School, that the language of security can also be the language of political priority (Wæver 1995; Buzan et al 1998). As such this thesis argues that perceptions of a security of energy supply crisis, which started to

emerge strongly from 2004-2006, were essential to a political re-awakening regarding energy, or a degree of repoliticisation. It also argues, however, that it was precisely the specific nature of the crisis narrative, focused on insecurity and fears of dependence on unstable foreign suppliers, which elicited a high degree of political response. This reflection about *why* more significant processes of change were put in place is one which is original with reference to UK energy governance, if not with reference to analyses of EU energy governance in the 2000s (cf. Jegen 2009; Froggatt and Levi 2009).

Fears about energy insecurity are understood to have also necessitated a ‘re-think’ of energy which, in turn, brought to light the degree to which processes of depoliticisation had left the UK state lacking significantly in political capacity to deliberate and act in an informed manner. The process of ‘re-thinking’ can then also be offered as part answer to the fourth question which is about *how* energy governance change has taken place. As energy became repoliticised and ‘re-thought’, and as the problems understood to be facing energy did not relent over time, the depth and complexity of these problems started to come to light. Energy policy had, as such, new objectives of energy security and carbon dioxide reduction and it was decided that new institutions, with different mandates, would be required to implement these complex, and possibly in some instances conflicting, new objectives.

Such processes, theoretically, would also have to lead to conclusions that existing governance structures are less than capable of delivering in order for paradigm change to take place. The neoliberal perspective continued to inform various elements, including some personnel within Ofgem and the energy division of the Department for Trade and Industry (DTI), who still maintained that structural changes were not required. Others believed and argued, however, that the PEPP needed an overhaul. Amongst these groups were those informed by ideas about climate change and the ways in which energy policy could be used to help in the process of mitigating it, and reducing carbon dioxide emissions. These political, and academic groups, continued to argue for change, and most importantly, provided evidence of failure of existing policy to deliver on objectives (RCEP 2000; PIU 2002; van der Horst 2005; Stern 2006; Greenpeace 2006; Ragwitz et al 2005; Rutledge 2007; Mitchell 2008; Scrase et al 2009; Giddens 2009; Paskal 2009; Macalister 2010; WWF 2010). Some arguments that had been marginalised, and compromised, over time became more credible and audible

given the ongoing ‘re-think’ of energy and political interest in addressing newly perceived problems.

What this thesis ultimately tells us about UK energy governance is that although it has been through an accelerated period of re-think and structural change on many levels, it cannot yet be argued that an energy policy paradigm shift has taken place. This is partly because of the degree to which dominant ideas about the role of markets in energy supply have not shifted, but also because of the continuing degree of uncertainty and change still ongoing in 2011. One important new norm is, however, identified in the emergence of an energy-security-climate nexus within processes of energy governance. As such, energy and climate policy are now understood to be inter-related and devised together within one Department of State, the Department for Energy and Climate Change (DECC). In addition, policies traditionally utilised to meet climate change objectives, such as reducing carbon dioxide emissions, are now also being set against the achievement of energy security objectives. This is partly because it is now understood that boosting domestic supplies, including of renewable energy, will provide for energy security by allowing the UK to import less from abroad.

3. *Methodology*

This thesis is written with the intention of providing deeply contextual explanations of UK energy governance processes and structures, of how and why they are changing, and of what type of system is emerging in comparison to the starting position. It is a largely empirical piece of work but is structured around a somewhat mixed conceptual framework which is applied in order to assist in producing a more in depth understanding of energy governance processes from 2000 to 2010, and it has been applied for that reason. Each of the concepts put to work allow for the operational co-existence of structures, agency, influential ideas, both on a cognitive and normative level, and possibilities for change. This thesis is less concerned with finding generalisable theories, with pointing to gaps in theory or, indeed, with suggesting new policies or political approaches. As such, this thesis does not apply theory in order to “...aspire to predict or to prescribe...” and is a non-normative, reflective approach to a specific subject area (Strange 1988: 11 and 19).

The second way in which this thesis is structured is around the four research questions

presented in the section above. These are simple questions, which give rise to complex answers, and which have been phrased in order to leave the thesis open to answers, rather than to guide it in one particular direction. Clearly the questions as phrased do imply that some change is happening and this is the starting position of the thesis. Even those analyses on the UK energy policy paradigm (Rutledge 2007), or sub-sets of this policy area (Mitchell 2008; Kern 2009), which argue that UK energy policy is remarkably resistant to change do acknowledge that some changes are, as elsewhere, taking place. The focus, therefore, has to be upon producing a non-normatively biased answer as to the depth and degree of change – this allows still for consistency of governance practices to co-exist alongside processes of change.

There is a degree to which the initial characterisation of UK energy governance as of 2000 as ‘pro-market’ might guide the analysis that unfolds only toward answering questions regarding the degree to which governance in 2010 is less ‘pro-market’. This can be taken as a positive in that, as already argued, classic IPE questions of states and markets in energy governance are under-represented (important exceptions being Helm 2003; Rutledge 2007; Mitchell 2008; Kern 2009). But it could also be taken as a negative if it were to blind the analysis to other *types* of change taking place. This is where the three principal narratives, the third structuring element of the thesis, come back into play, in particular the climate narrative which keeps the thesis alive to non ‘state-market’ ideas about energy governance.

The principal difficulty in attempting to answer questions about paradigm change has been the contemporary nature of this analysis. Original intentions had been to finish the analysis in 2008, allowing at least a few years for ‘historical perspective’ to develop between the closing date for the analysis and writing up findings. However, as the creation of the Department of Energy and Climate Change (DECC) in November 2008 was such a significant institutional change it was felt that the analysis would have to continue beyond that point. With the end date extended to 2010, however, new challenges emerged in that there has been little pause for extra contemplation of the very recent events which have unfolded.⁵ On the one hand this has allowed to thesis to

⁵ 2010 was chosen as a cut off date due to the May general elections and the change in Government. However, the consistency of new energy governance structures, given the change from New Labour to the Conservative- Liberal Democrat coalition, tend to show staying power and a higher likelihood of lasting structural change.

consider some more significant changes to the way in which energy has been governed in the UK, leading to a conclusion that some structural changes have taken place. On the other hand, however, it might have been easier to come to firm conclusions about the degree and type of change given a few additional years of hindsight. Instead the conclusion is of ‘evolving’ or tendential structural change.

As the subject of this thesis is governance, processes of policymaking and the structures that delineate them, the main focus is upon a textual analysis of the key pieces of policy documentation from 2000 to 2010. As the empirical section of the thesis is split into three consecutive periods of time both the language used, reflecting emerging narratives and alternative ideas, and the content, in terms of policy objectives and instruments, can be seen to evolve from period to period. The analysis of policy documents, and associated reviews and consultancy reports, has been supplemented with, and cross-referenced against, a series of unstructured interviews. These were conducted with policy analysts, decision-makers, Government advisers, third-party consultants and those involved in writing policy reviews.⁶ These interviews have been further supplemented by a range of private conversations with, and conference presentations by, policy analysts and decision-makers.

The primary purpose of conducting the interviews was to understand the perspective from which each individual was approaching energy and how it should be governed. Interviews have usually taken the form of conversations rather than a formal question and answer session in order to leave the interviewee open to offering their viewpoint, rather than reflecting back my own. Interviews with those involved, either directly or at the periphery, of UK energy policymaking have been particularly helpful, also, in understanding processes which take place ‘behind-the-scenes’ which are not reflected in formal policy documents. As such, some indication emerges about processes of compromise and how they can affect policy outcomes.

Not all interviewees were happy to have their names and employment details revealed and, in that a level of anonymity seemed to allow for more in-depth conversations, it was decided to refer in the text of the thesis to an interview number, institution and rough date of interview only. The degree of reluctance to be put formally ‘on the

⁶ See Appendix 1 for a full list of interviews, institutions and dates, as well as for a list of private conversations and presentations that have further informed this work.

record' might indicate the degree to which energy was becoming repoliticised by the time the interviews were taking place, from the end of 2007 to mid-2011. One final difficulty that should be mentioned is that it was not always, partly due to a high degree of staff turnover and institutional change, possible to find personnel to interview that had experience of energy policy across the time-span covered by this thesis. Some of the most informative interviews have been conducted with energy policy advisors who have been involved across the whole period.

Lastly, in terms of methodology employed, in addition to the focus on representatives of the state in energy, and their advisors, this thesis has also conducted an analysis of popular media reports, and alternative non-governmental organisations (NGOs) and think tanks. These have tended, particularly within those chapters focused on the earlier periods of analysis when energy governance structures displayed more consistency than change, to be reflective of alternative narratives about energy. However, by the last empirical chapter which covers 2008-2010, some of these narratives can be seen within Government papers and other official documents. This, in particular, applies to the energy security-climate narrative which married together ideas about energy security with solutions which had emanated from within the climate perspective on energy.

4. *Brief Thesis Outline*

It has already been suggested that there are three principal structuring elements to this thesis, the conceptual framework, the four research questions, and the three principal narratives about energy and energy governance. All of these structuring elements will have been introduced by the end of chapter two of the thesis, the research questions already having been outlined in this introduction. Chapter one, which serves as a review of the available literature on energy governance, paradigms and change, will also present a view of recent energy events through the eyes of the three principal perspectives on energy governance. This provides the rest of the thesis with an indication of what kind of energy world was understood to exist from each perspective, but also what kinds of political responses were taken to be appropriate as events unfolded. These perspectives, and the narratives which they inform, are understood as being analytically separable, but also as being fluid and subject to change over time. One viewpoint that each perspective came to share over the course of the 2000s,

however, was a perception that energy, albeit for different reasons, was once more in ‘crisis’.

Chapter two provides an outline of the conceptual framework, the third structuring element, as well as of UK energy governance as of 2000. Much has already been said about the conceptual framework, so suffice to say at this point, that the PEPP is characterised in chapter two as being made up of five separate, but inter-related, levels of governance. These are: ideas about energy, rarely analysed elsewhere, and about energy governance, which together provide the ‘interpretive framework’, objectives and instruments of policy, and the physical institutions of governance. Governance, as such, is understood as taking place upon a variety of levels and requiring a greater or lesser degrees of state and market input over time (cf. Rosenau and Czempiel 1992). Importantly, politics is understood as being made up of collective deliberation, including social interaction, the possibility for informed agency and for choice (cf. Hay 2007: 65-70; cf. Wood 2011).

This thesis has been structured in order to take account of the idea that change, if it is to be understood as a relative concept, cannot really be understood or, indeed, measured if there is no in depth understanding of the starting position. This premise might fall foul of criticisms that such an approach would tend an analysis towards taking too little account of the longer-term evolution of that area of policy (Mahoney and Thelen 2010: 5). Chapter three, therefore, has been constructed to in order to place the PEPP, as of the year 2000, into a much longer-term historical and ideational context. It also draws our attention to the depoliticised and embedded nature of the PEPP by the advent of the New Labour Administration in 1997.

Chapters four, five and six are the empirical chapters of the thesis covering, in turn, the periods 2000-04, 2004-07 and 2008-10. Chapter four, following on from chapter three, initially provides more detail about the ways in which the PEPP was maintained and operated under New Labour. It soon moves on, however, to suggest the emergence of various challenges to the status quo in energy governance, and, in response, a high degree of resilience within the various levels of the PEPP. The degree of resilience is explained in particular through the application of notions of depoliticisation, in particular ‘technocratic’ and ‘deliberative’, which had been outlined in chapter two. By considering the PEPP during this period, of growing climate challenge, we can

better understand how the PEPP managed to continue to draw on existing ideas, policies and methods of governance in answer to growing commitment to action on reducing carbon dioxide emissions.

Chapter five deals mostly with the question of why change of more profound proportions started to take place. Various events were unfolding within the international political economy of energy at this time, not least Russian energy governance restructuring and the Russia-Ukraine gas transit dispute, which were perceived as possibly threatening to UK energy supplies, and governance. This chapter will seek to trace relationships between the particular way in which energy crisis was becoming perceived, as a national security concern, and the start of processes of energy repoliticisation and of 're-thinking' energy. Some consideration, within this, will be given over to the role of wider public perceptions as well as to the language of security in prompting political engagement with energy once more. Links will also be drawn between the ongoing process of 're-thinking' energy, the continuing sense of crisis and the formalisation of climate objectives through the acceptance of the European Union's '20-20-20' commitment on climate change.⁷

In chapter six the process of 're-thinking' energy is understood to still be ongoing. It is however also accompanied by mounting evidence of failure, and alternative solutions being produced by increasingly high profile but competing political protagonists. It is during this era that it can be claimed that change really started to escalate, resulting in new institutions and evolving ideas about energy and about new methods of governance. This chapter concludes by suggesting that although a degree of change had taken place within each identified level of the PEPP, it did not yet feel like a planned process of profound governance change had been completed. This is largely because, as of the end of 2010, 'market' ideas about economic governance had not been rejected by political elites nor had a comprehensive new framework been identified.

⁷ This is an EU package which builds on the Kyoto protocol and was endorsed by EU leaders. The targets are to reduce greenhouse gas emissions by 20% over 1990 levels, to consume 20% of energy from renewable sources and to reduce primary energy use by 20% - all by the year 2020. These targets became legally binding in January 2009 when the 'climate and energy package' was approved by the European Parliament (see http://ec.europa.eu/clima/policies/package/index_en.htm).

What can be identified therefore across the empirical chapters are three broad eras of the complex evolution of change: consistency of interpretive framework and associated structures; repoliticisation of energy under conditions of perceived crisis; and change - even if not yet representing a significant break with the past. In total these eras of change have led to an emphasis on the complex, messy and evolutionary nature of change, but they also raise the question of what might constitute necessary conditions for paradigm shift to be considered as taking, or having taken, place.

Chapter seven returns in more detail to the conceptual framework outlined in chapter two. Although this framework is ever present within chapters four to six, particularly in that it structures them and informs the analysis, chapter seven reflects in more detail on the various iterations of change and on the differences between each chapter in the ways in which change had evolved. It does so by looking back at each of the empirical chapters in turn and considering how best to understand why and how energy governance evolved through the prism of the conceptual framework.

The concluding chapter will briefly look into some of the implications of the findings of this thesis for the ways in which we can understand UK energy governance today as well as for the literature reviewed in chapter one. It will, however, also eke out further implications for those theoretical concepts, policy paradigm theory, 'speaking security', and de- and re-politicisation, which have largely underpinned the framework of analysis used here. Some attempt will be made to identify the ways in which those concepts, some of which have emerged from different disciplinary backgrounds, conflict and inter-relate with one another, as well as complement each other.

Chapter 1: Perspectives on Energy, Governance and Change

Introduction

... all we have so far, are competing doctrines – sets of normative ideas about the goals to which state policy should be directed and how politics and economics (or, more accurately, states and markets) ought to be related to one another. (Strange 1988: 16)

This opening chapter bridges the wide and varied literature that concerns itself with Western, including UK, energy and how it is, or in some cases how it should be, governed. It has been observed on a number of occasions that within the social sciences there are competing doctrines, or sets of normative ideas, about the objectives and organisation of state policy. These compete to provide explanations and solutions for problems in the social and political world and offer ideas about the goals to which state policy should be directed and how politics and economics, or states and markets, ought to be related to one another (Strange 1988: 16; cf. Runciman 1969: 156 onwards; Smith 1987).

Recent academic analyses of energy prove no exception. Broadly speaking, three principal perspectives can be identified within academic analyses of energy and its governance, being pro-market, geopolitical and climate. This chapter will be organised around these three different, and in some ways competing, understandings of, and political approaches to, energy. The pro-market perspective has, as with other areas of research, tended to dominate academic analyses of UK energy over the past few decades, as well as analyses conducted within the energy directorate of the Department of Trade and Industry (DTI). More recently, however, geopolitical and climate interpretations have become increasingly commonplace.

These differing perspectives are presented in this thesis more as heuristic devices than as rigid characterisations. The boundaries between the perspectives as characterised here are porous, there are some similarities between groups, some ideas overlap, and they are understood here as subject to change and adaptation over time. At this stage of the thesis these perspectives are, however, also put forward as largely reflective of genuinely held beliefs about energy and how it should be governed.

This chapter commences with a brief definition of each academic approach to understanding energy, its socio-economic role, as well as sets of corresponding ideas about how it should be governed. The chapter proceeds upon the notion that these different understandings of energy, and how it should be governed, produce in application particular sets of policy, governance recommendations and structured outcomes. This will be followed in each case by a more detailed assessment of the different ways in which each perspective has tended to construct understandings of, and responses to, energy events in the 2000s. By doing so, these sections fulfil the function of outlining both the ideational and material context within which UK energy governance changes were taking place as well as an assessment of current literatures on energy.

One consistent perception across pro-market, geopolitical and climate perspectives is that energy had entered a period of crisis in the first decade of the 21st century. The various ways in which energy crisis has been constructed and understood are shown to be being partly constitutive of the range of governance solutions offered. As a generalisation, although each perspective recognises certain core components of energy's renewed hour of difficulty, different emphasis has been placed on the importance of those components depending on the theoretical approach and/or related, normative position taken. Clearly, each perspective may well represent an oversimplification of events but these perspectives are important to understand in that they are largely constitutive of the academic literature on energy over this time period.

As the review of perspectives on energy evolves an interesting, arguably under-analysed, debate emerges. Elements within each of the three categories dealt with by this chapter have increasingly begun to consider, alongside perceptions of crisis, that international energy has entered, or at least should enter, a period of significant change. As might be expected, a range of reasons are offered for change, but the most interesting new analyses emphasise change of a profound nature, often referred to as paradigm shift. The varied literature on paradigms and change is utilised within this thesis as a starting point from which to begin the analysis of change in UK energy policy and governance.

1. The Liberal-Geopolitical Debate

As outlined in the introduction to this thesis it has been suggested that two competing narratives currently dominate the literature on energy (Youngs 2009: 6; cf. Correlje and van der Linde 2006; Finon and Locatelli 2008; Luft and Korin 2009: 340). Clearly, this debate is not new in international political economy (IPE) terms, and gives energy analysis from an IPE perspective an impression of being stuck in a time-warp. But it is at least a debate that recognises that there are differing political approaches to energy both geographically and historically, even if it rarely asks questions about why these different approaches exist. Prior to the re-emergence of this debate many energy experts had fallen in line with leading energy academic and US Government advisor, Daniel Yergin, who had in 1998 concluded with regard to energy that "...it is the economic terms themselves, rather than the philosophy of the terms, over which governments and companies wrangle" (Yergin 1998a: x).

Neoliberalism had, however, become the dominant approach both to governing energy, and for academic analyses of energy, from the early 1980s to at least the mid 2000s (Hadfield 2007; Finon and Locatelli 2008; Youngs 2009). Although it had constituted a small but growing strand of the energy literature pre the 1980s, work written from a pro-market perspective did not come to dominate the energy literature until after the paradigm shift to pro-market governance. Pre-1980s this body of work was focused on advocating pro-market energy, by the 1990s it was, as argued again below, more focused on describing aspects of policies or on problem solving within the boundaries set by pro-market energy governance practices, which already reflected many of the ideas earlier advocated.

By 2001 one much cited study concluded that international commodity markets had now developed to such an extent that "... competition is the rule and economics works" (Mitchell et al 2001: 176). As recently as 2006, pro-market energy analysts suggested the "old world" model, which is laden with state guarantees, subsidies and other measures that dampen the "...pure expression of market forces...", has been rejected by Western nations. The 'new world' model had come to replace this old model to the extent that "... (t)oday almost all consuming markets have adopted plans to allow for a greater role for the "invisible hand" of the market" (Hayes and Victor 2006: 322). The extent to which this perspective, particularly in terms of appropriate roles for markets and the state, had become accepted among energy academics and policymaking elites

alike, meant that privatised and liberalised energy markets were increasingly analysed as *fait accompli* as opposed to social construct (Egenhoffer and Legge 2001; Hayes and Victor 2006; cf. Helm 2005a; Cherp and Jewell 2011).

There are three quite recent analyses of energy security, if not precisely about energy governance, which have attempted to broaden the debate by considering a slightly wider range of different conceptual approaches to understanding energy (Belyi 2003; Ciuta 2010; Cherp and Jewell 2011). Felix Ciuta in a recent article, which serves as a conceptualisation of the notion of energy security, breaks academic work down into three key perspectives on, or logics of, energy security, being the logic of war, of subsistence and of total security (Ciuta 2010: 124-5). Each dimension, or logic, reflects differing perspectives on what is important in seeking to understand what energy means, on understanding what is happening and therefore on what the priorities for governance should be. Ciuta encourages for more research which, like his analysis, allows for conceptual variety and for meanings to be contextualised (Ciuta 2010).

1.1 Brief Definition: the 'Pro-market' Perspective and Energy

The emphasis in this section is on reviewing academic research, written from a pro-market perspective, on energy, including interpretations of recent events, and how it is or should be governed. This will be done only in brief, however, as chapter three, on the creation of the PEPP, will outline this perspective in more detail. The pro-market view rested largely upon neoliberal economic, and then also rational choice, ideas about governance.

One of the fundamental ideas underlying pro-market energy perspectives, as argued by advocates of neoliberal governance practices in the late 1970s and early 1980s, was related to the socio-economic role that energy was considered to play. The post 1945 emphasis on energy's central role in powering modern economies was de-emphasised in the 1980s when it was suggested that energy should be considered first and foremost as "...just another commodity..." rather than a national or merit good (Lawson 1989: 23; see also DoE 1982; Littlechild and Vaidya 1982; Cherp and Jewell 2011). From this perspective energy, as a commodity, is ultimately fungible, or replaceable, which implies little or no intrinsic value (cf. Youngs 2009: 7).⁸ By 2001 oil, the most

⁸ Intrinsic value is understood here in the philosophical sense whereby an object can have value in and of itself or for its own sake.

dominant and problematic energy source was understood to have been “commoditized” (Mitchell et al 2001: 176).

Broadly speaking, therefore, energy should be left to trade on open markets and, to the extent that governance is required, it should be exercised with an emphasis on economic, or cost, efficiency over state planning and on ensuring competition (Littlechild and Vaidya 1982). It followed that energy, like other economic sectors, should become subject to processes of deregulation and privatisation as the new ideas became implemented, and later sedimented (Borenstein and Bushnell 2000 in Jegen 2009: 5). The pro-market system of governance which was emerging in the UK, and Chile, came to be legitimated and institutionalised in the UK and was underpinned internationally by the emergence of the ‘Washington Consensus’ within inter-governmental organisations (IGOs) in the 1980s and 1990s (see Held 2006: 161).

Another important idea underpinning the pro-market perspective was that the newly emergent freely trading energy markets, once further established, should be supported through international co-ordination, based around the setting of generic, good governance standards, and multilateral institutions (Youngs 2009: 8). The clear focus within this perspective has been on positive economic interdependence in energy trade, on “...markets and institutions...”, their internationalisation and their vital roles in energy governance (Youngs 2009; Goldthau and Witte 2009; Lesage et al 2010). Much of the original thinking behind promoting the liberalisation of oil markets and pricing had been to prevent ‘states’ from impacting negatively upon the international oil trade in that smoothly functioning ‘free’ markets were understood to be the “best insurance” for a country’s security of supply (Mitchell et al 2001: 177; cf. Youngs 2009; Lesage et al 2010; cf. Cherp and Jewell 2011).

1.2 Energy in the 2000s: Events and Pro-market Interpretations

The pro-market energy perspective can be further defined here by considering the ways in which it has tended to interpret and explain key energy events in the 2000s, both in terms of why they were happening and what should be done about them. These events, and their interpretation provide important backdrop, or context, in terms of understanding how energy governance and politics evolved between 2000 and 2010.

Initial observations, particularly within UK energy policymaking circles, about key elements of the international energy trade which had started to alter were quite sanguine (PIU 2001; DTI 2003; cf. Noel and Pollitt 2010). After two decades of declining demand for oil, quite substantial, but relatively unanticipated, growth in fossil fuel demand had been emerging. Much of the additional growth was coming from China and India in line with their fast accelerating economies (Mitchell et al 2001; DTI 2003). The UK was due, over this same time period, to move from a net exporter to importer of oil and gas (Blackhurst 2004). At the same time, climate change arguments were gaining political saliency, the Enron and California crises had occurred, and Hugo Chavez's Administration had seized control of Venezuela's large oil exporting company, PdVSA.

However, as briefly alluded to above, neoliberally pro-market analysts had spent much of the very early 2000s arguing that neoliberalism had become political orthodoxy in energy, on a globalising basis, and was providing solutions to old problems (Yergin 1998a; Mitchell 1998; Mitchell et al 2001; Hayes and Victor 2006). One leading energy analyst argued, for example, that energy security, in a geopolitical sense, was now "a footnote... an empty phrase" as archaic as "...medieval mystery plays..." (Mitchell et al 2001 in Youngs 2009: 7). Issues facing world energy trade, such as "nationalism" and "sovereignty", were understood to have been resolved (Yergin 1998a: x). Attempts were being made to sediment neoliberal energy governance via international institutions such as the Energy Charter Treaty (ECT) (Bielecki 2002; Chen and Jaffe 2007). Given the degree of belief in the institutionalisation of free and fair international energy markets, especially in that they are constitutive in and of themselves of energy security, it is less surprising that, even as the events of the early 2000s started to unfold, the pro-market perspective still upheld a sanguine view of the international energy environment.

By the mid-2000s, however, things had started to change even from a pro-market perspective, in that 'politics', in the form of 'statism' and 'resource nationalism', was starting to emerge strongly again. Pro-market commentators, having so recently celebrated the death of 'old world' energy, were perplexed. China, it was now observed, was pursuing a programme of aggressive energy diplomacy (Baghat 2006; Yergin 2006; Chen and Jaffe 2007). It had begun to sign bi-lateral energy deals with various African states, Venezuela, and Russia, as opposed to buying its energy on open markets. Furthermore many of the countries with which China was dealing directly

were considered to be anti-OECD, if not outright enemies of the modern liberal, democratic order. China was thereby understood to be undermining marketised energy as well as current and further multilateralism in energy (Chen and Jaffe 2007).

Furthermore, in 2004 Russia had started to extend state control over various of the country's key energy companies, despite much criticism from Western powers, and had imprisoned leading energy oligarch, Mikhael Khodorovsky. Russia had 're-negotiated' contracts with high profile global energy companies, such as ExxonMobil and Shell, and had announced restrictions on foreign direct investment (FDI) in Russian oil and gas sectors thereby discriminating against international oil companies (IOCs) (Yergin 2006; Baghat 2006; Dickel 2010). It was, however, the gas dispute between Russia and the Ukraine, and the consequent threat of reduced European gas supplies in 2006, that really shook pro-market commentators. It was considered that Russia was directly using energy as a political tool, a strategy which ought to have been unthinkable given claims about the orthodoxy of neoliberal forms of energy governance (cf. House of Commons 2007a).

In addition, oil and gas prices had started to rise rapidly, arguably partly as a result of market speculation that growing 'resource nationalism' would prove bad for investment prospects, but also reflecting growing political uncertainty. Oil and gas prices more than trebled between 2002 and 2007, with oil prices peaking at over \$140 per barrel in 2008 (Youngs 2009: 1). What is reasonably clear, however, is that these kinds of prices had not been anticipated by pro-market analysts – the Economist had not been alone in 1999 when it speculated a future price of \$5 per barrel of oil (Economist 1999 in Helm 2003: 387). However, the high and volatile energy prices of the mid and late 2000s provided much of the reason why energy was starting to be considered to be in crisis in Western importer nations both within public, political and academic circles.

This overtly geo-political, and or 'statist', turn in energy, trade and relations, was interpreted as having negative consequences for international energy markets and future investment requirements (Erixon 2009; Goldthau and Witte 2009). State run, or national, oil companies (NOCs), which had access to increasing percentages of the world's oil and gas partly due to Russia's and China's actions, were understood not to have sufficient financial capacity, or management capability, to re-invest in required levels of exploration and production to meet rising global demand. This was partly

because “...investment decisions based on political calculations tend to ignore some of the underlying economics” and as a result there was a high “...risk of money flowing into the wrong projects...thus negatively affecting allocation of investment” (Goldthau 2010: 43). NOCs were, in addition, understood to be less transparent, transparency being held as key to the efficient operation of world markets (Goldthau 2009: 44).⁹

As such, there increasingly emerged a trend, amongst previously sanguine pro-market energy analysts, of concluding that energy was, once again, in crisis and of referring once more to ‘energy security’, meaning (in-)security of supply, as a significant current problem (Yergin 2006 and 2007; Stanislaw 2006; Baghat 2006).¹⁰ Pro-market explanations laid the blame for the experience of crisis largely outside the Organisation for Economic Co-operation and Development (OECD) countries, on those countries who were reverting once more to the practices of ‘resource nationalism’. The project of international liberalisation would only work properly if all major players in the energy markets followed ‘good governance’ practice, and state intervention in energy trade did not fit with such practice.

1.3 Crisis Response and Policy Recommendations: More of the Same

Some pro-market analyses somewhat dismissed the re-emergence of ‘statist’ behaviour, by concluding that it would over time quite simply just be proved ‘wrong’ (Considine and Kerr 2002; Finon and Locatelli 2008; Noel and Pollitt 2010). Others, however, started to consider solutions to the crisis, as perceived. Some analysts have noted that, from the pro-market perspective on energy governance, if a particular outcome is unsatisfactory in some way the answer usually proposed is “... more private ownership, the removal of restrictions on trading, and the promotion of competition” (Carter 2001: 63; cf. Ciuta 2010; Scrase et al 2009). Felix Ciuta, has further observed that solutions

⁹ Early references to the problem of low transparency in international oil markets can be found in a 1979 study concluding that models predicting global oil reserves could only ever be approximate given a general lack of information (Dasgupta and Heal 1979). This conclusion is similar to that reached by Susan Strange who claimed that economists were wary of applying theory to energy due to the high susceptibility of energy markets to political forces (Strange 1988: 194). Dasgupta and Heal proposed, as a solution, that countries should be encouraged to improve transparency allowing models to become more accurate and markets to trade on sufficient information (Dasgupta and Heal 1979: 473).

¹⁰ The sense of threat to supply security was further underpinned, in a post 9/11 world, by fears of Al Qaeda attacks on energy infrastructure and transport systems (Baghat 2006; Yergin 2006).

offered with the intent of improving market functionality are often put forward with the understanding that they are ‘generic’ in that they can also be applied to many other areas (Ciuta 2010: 12). It is not surprising, therefore, that initial responses to the energy crisis, and well as to new climate change targets, represented little break from ‘business-as-usual’ (Mitchell 2008). This would also be considered an expected response given the degree to which the PEPP had become embedded in the UK.

Unsurprisingly, therefore, solutions proffered initially were based again upon notions of markets, and market instruments, as sources of energy security in and of themselves (Bielecki 2002; Yergin 2006; Baghat 2006; Erixon 2009). It had previously been understood, as alluded to briefly above, that free trade represented the “...best route to national energy security for most countries...” and, in addition, that market institutions were vital components in energy security for Western nations (Mitchell 2002: 4-5). Some analysts emphasised the need to further develop and internationalise gas markets, and short-term trading in gas, such that gas could be traded more freely thereby hindering the possibility for countries, like Russia, to impact on trade (Interview 1; cf. Youngs 2009: 7)

Much analysis focused on the need to make renewed efforts to encourage further liberalisation, privatisation, transparency and competition around the world and to support emerging market institutions (Bielecki 2002; Yergin 2006; Erixon 2009; Goldthau and Witte 2009). The idea was that those countries pursuing ‘statist’ energy policies might still be convinced of the inefficiency, particularly economically, of such programmes thereby making them more likely to move toward free market international trade, good governance and transparency (Interviews 1 and 19). This viewpoint was, perhaps in hindsight, hopeful in the extreme, especially given the lack of co-operation from producer states over time in providing relevant market information (Goldthau and Witte 2009). Interestingly, given later developments, Daniel Yergin had cautioned against political reactions in the West to the crisis that would encourage greater ‘independence’ in energy. From his perspective security for all consumers resided in the stability of the market and secession, therefore, could not be an option (Yergin 2006: 76).

2. The ‘Geopolitical’ Perspective

As is the case in other areas of analysis and politics, there are clear tensions between the pro-market and geopolitical perspectives on energy, events and governance. A such, the geopolitical perspective on energy can be taken here as a direct critique of the pro-market perspective, or as one analyst put it, of the “economistic” turn in energy analysis (Hadfield 2007: 2).

It is worth making a brief point of differentiation here to avoid confusion. Much pro-market research on energy refers to ‘statism’ in a blanket fashion as covering a multitude of approaches to energy, i.e. any approach that assumes state, or political, intervention in energy markets. This might include both states pursuing ‘aggressive’ energy relations internationally, such as China, as well as governments deciding on state ownership and management of domestic energy companies, as was evident in the UK prior to the 1980s, but which could also be referred to as socialism. This section of the thesis, in attempting to avoid analytical confusion between realist and socialist politics, defines geopolitics very differently from state socialism.

2.1 Brief Definition: Geopolitics, Energy and Power

It could be argued that geopolitical perspectives on energy share a long and well-established history. These perspectives represented arguably the dominant way of thinking in international energy, with the emphasis on oil, relations for the most part of the 20th century. After the brief hiatus in the 1980s and 1990s, geopolitical perspectives seem to have been substantially revived in the UK and Europe in the mid-2000s, particularly as perceptions that energy is in crisis have deepened (McGowan 2008: 91). This is, as with all organisations of political thought into groupings, a wide-ranging group.

In general, however, and in contrast to the pro-market perspective on energy, the geopolitical perspective is defined here as emphasising the geographically fixed and finite nature of natural resources, in particular, and tends to associate possession of resources with power and influence (Venn 1986; Hadfield 2007 and 2008; Klare 2008a; Gilpin 1987). Partly as a consequence of this and the associated importance of being able to access energy, the role of state sovereignty in energy governance is stressed, as are international energy relations and foreign policy.

Historically, energy has been understood, through geopolitical lenses, more as a national or *strategic* asset which states must be able to access for the maintenance of modern life, or as one analyst defined it, as the ‘lifeblood’ of modern economies (Gault 2004: 182; cf. Yamani and Ahmad 1981: 66). Other analysts have emphasised the importance of energy within diplomacy and international relations. Fiona Venn in her historical account of oil observes that “...the history of oil and the history of international relations...” are intrinsically linked (Venn 1986: 1). Such analyses contrast, clearly, with those that emphasise the fungible nature of natural resources as traded commodities within an economically and positively inter-dependent world.

Emphasis within this analytical group has been placed on the role of the state in ensuring energy supply security, on strategic, often bi-lateral, alliances, on the search for ‘exclusive backyards’ and on the use of military power to protect supplies (Youngs 2009: 8). Energy security has, therefore, been considered as a question for national level politics and associated arrangements (Goldthau 2011: 129). Analyses of energy’s past, particularly oil’s, often refer to military conflicts, between nations, exacerbated by the perceived need to access oil on acceptable economic and political terms (Venn 1986; Bromley 1991; Painter 1997; Clarke 2007). A reading of geopolitically informed energy literature offers up some pointers as to why energy, as an area of international negotiation, has remained remarkably free of agreement, let alone global governance ‘norms’, over the last century (McGowan 2008; Naturski and Surralles 2008).¹¹

This line of thinking ties in with recent foreign policy analysis which, although not obviously geopolitically informed, concluded that in the energy sector “...the state has been more resilient than anticipated...” (Hadfield 2007: 33). This is despite the period of substantial international marketisation that energy has been through. Furthermore, with reference to Keohane and Nye’s earlier observations on energy, the analysis concluded that the “...global dynamics inherent in a sector like energy are still largely at the mercy of national ‘holders of power’” (Hadfield 2007: 33).

¹¹ Examples often given are the ineffectiveness European Coal and Steel Community (ECSC) treaty and the failure of the Common Energy Policy (CEP) to reach final conclusions (Strange 1988: 192; McGowan 2008: 93).

2.2 Energy Events in the 2000s and Geopolitical Interpretations

Analysis of energy, through pro-market and geopolitical lenses, have a number of factors in common in the interpretation of energy events of the 2000s. As already mentioned they both understand energy to have entered a period of crisis and they both identify underinvestment in energy as a core component of that crisis. Geopolitical lenses, however, tend to interpret the crisis differently. Whereas pro-market analysts have understood underinvestment in energy to be in part caused by the ‘statist’ behaviour of some states, the geopolitical perspective conversely understood it as a problem caused specifically by the marketisation of energy (Gault 2004; Umbach 2010). It is observed that international energy markets are inefficient, not through lack of transparency, but in that they tend not to reflect some of the hidden costs of the world trade in energy. These costs range from environmental impacts to the costs of maintaining military protection for production sites, sea routes and pipelines (Youngs 2009: 9). In addition it is not considered possible to refer to international energy markets with any degree of accuracy as gas, and LNG, continue to be traded via long-term contracts and not on open exchanges (Belyi and Kuzemko 2007).

The argument continues that too much faith in a pro-market system has resulted in underinvestment in exploration and development for primary energy sources as well as in energy transit systems (Gault 2004; Umbach 2010). The private sector is understood not to have been sufficiently motivated to invest in this increasingly uncertain, and historically long-term, area. One analyst observed that it constituted “...a huge leap of faith to assume that since markets functioned in the 1990s, they will be able to cope with a future crisis in today’s changing political backdrop” (Myers-Jaffe 2005: 9).

Broadly speaking, this perspective has likewise understood the role of changing energy supply fundamentals within the crisis differently. It has been observed that after 2010 growth in oil supplies would come from a much smaller number of non-OECD states. Given that national access to natural resources is also considered to confer power and influence, hence notions of ‘energy superpowers’, these conditions would distort free-market dynamics and further exacerbate existing dependencies (Venn 1986; Clarke 2007; Klare 2008a). Together this would lead to a further reduction in the ability of markets to respond to energy crisis (Youngs 2009: 9; cf. Klare 2008a; Umbach 2010).

Michael Klare takes this argument one step further by dividing the world into “energy-deficit” and “energy-surplus” nations when defining his “new international energy order” (Klare 2008a:14). Given that trade in resources is understood from this viewpoint as a zero-sum game energy deficit nations, such as the US, China and UK, will increasingly have to compete with one another to secure supplies from energy surplus nations such as Russia and Saudi Arabia. Furthermore, enormous wealth transfer will continue to take place between consumers and producers (Reihing 2007; Clarke 2007; Klare 2008a). Klare claims that “...in 2006 alone, oil-exporting countries sucked up an estimated \$970bn from oil-importing states” (Klare 2008a: 15).

In extreme cases, as in the past, it is understood that increased competition, and relative lack of primary energy sources, may well lead to inter-state conflict, militarisation and war (Lugar and Woolsey 1998; Le Billon 2005; Russell 2008; Wilson 2008; Klare 2008a; cf. Parra 2004). This has been seen as particularly relevant in developing countries but also as developed countries seek to defend access to globally important natural sources of energy such as oil and gas (Klare 2008a; cf. Lugar and Woolsey 1999; Le Billon 2005). Some have claimed that “...the conflict-laden history...” of international oil in the twentieth century is, therefore, bound to continue (Mommer 2000: ii). This line of thinking lead to a natural conclusion, as explicated in more detail below, that nations should defend themselves by seeking to become more independent in energy and that nations with sizeable indigenous energy supplies should keep control of them.

From the geopolitical perspective, therefore, Western governments are understood to have been slow to understand, and react to, these emerging political realities thereby exacerbating the energy crisis. Western governments stand accused of failing to fully acknowledge the role of the state in procuring and protecting national supplies of energy (Klare 2008a: 21). These criticisms are largely levelled at EU countries, such as the UK, who understanding energy to be a tradable good, have overemphasized the role of market forces in energy and underemphasized the role of national, strategic and geopolitical interests (Umbach 2010: 1230).

2.3 Crisis Response and Policy Recommendations

Perhaps not surprisingly, given the kind of critique levelled at the pro-market energy system above, some within the geopolitical group have suggested that governments in

the West need to become more directly involved in governing energy. Amelia Hadfield's suggestion that energy be integrated with and into wider foreign policy structures is one that is echoed quite widely elsewhere in this group (Hadfield 2007; Gault 2004; Umbach 2010; cf. Youngs 2009). Specifically, Hadfield suggests that

...the challenge of ensuring a consistent supply of energy whilst avoiding 'security of supply' problems clearly moves energy out of the commercial realm... and into the terrain of cross-border issues and national interests where foreign policy issues reside (Hadfield 2007: 3)

This she observes is a particular concern for the UK.

Others have emphasised the need for government to become more involved *per se*, alongside difficulties associated with such a process, and not just in devising energy foreign policy (James A. Baker III Institute for Public Policy 2001; cf. CEPMLP 2006; Hadfield 2007). One high-level report in the US warned that

...the US administration had retreated too much from the energy sector, leaving decisions to de-monopolized private companies when a more 'comprehensive strategic approach' needed to be pursued through national champions. (James A. Baker III Institute for Public Policy 2001: 29)

Furthermore, it has been proposed that foreign policy should be designed in such a way as to take greater account of rights to policy-making sovereignty and specific national demands within producing states (Gault 2004: 182; Umbach 2010: 1239). Too much emphasis on global economic processes when analysing energy and its governance has been to the detriment of analyses that take national and regional political requirements into account (Umbach 2010: 1239).

Within the context of this thesis on UK energy governance and change, the geopolitical perspective on energy is understood to have provided an alternative picture, or re-telling, of the energy crisis. This thesis, largely in chapter five, will suggest that it is partly the urgent and evocative picture created by this perspective on energy crisis, and its effects on public perceptions of energy, that prompted political elites to re-consider energy governance in the UK. In fact Klare's recent book, outlining a geopolitical nightmare in future energy relations can, to some extent, be read as strategically using the fear of such a future to provoke change (Klare 2008a; see also Homer-Dixon 2009).

3. Climate Narratives

The pro-market-geopolitics debate, for all that it may still represent quite accurately academic research into energy and its governance, is too narrow. Analyses focusing on such debates tend to underestimate and under-emphasise another strand of the literature that deals specifically with questions of energy governance from a climate perspective. The climate narrative is characterised as that section of the climate change literature that is concerned specifically with how energy policy and governance practices might enable climate change mitigation. This perspective has long presented a critique of pro-market energy governance by repeatedly suggesting policy and governance change in order to enable the delivery of a more sustainable, low carbon energy system.

3.1 Brief Definition: Critique and Change

The way in which this perspective will be characterised here is, perhaps, more artificial than the two previous perspectives. As Steven Bernstein has suggested, providing definitions of climate or environmental groups can prove problematic. He has observed that environmental analysts, although they may be pursuing a similar end game in the protection of the planet, often suggest extremely different routes to that same end (Bernstein 2001: 29). Even at the time of the first UN conference on the environment, the ‘Stockholm Conference’ of 1972, splits had emerged. These were between environmental scientists and conservationists who understood the earth’s resources to be finite, and therefore argued for limits to growth, and those who were more concerned with economic growth and poverty reduction (Bernstein 2001: 29; cf. Meadows et al 1972; Tickner 1993). This split is characterised by Joerg Friedrichs as that between the Neo-Malthusians, who take the view that limits to growth present an inescapable human predicament, and the Cornucopians, who believe in man’s ingenuity and ability to solve problems with technology and knowledge (Friedrichs 2011: 1; cf. Carter 2001).

Attempts to characterise the climate perspective here need to be conscious of these rifts. By the early 1990s a “...shift in norms of environmental governance had occurred...” which can be characterised by a general acceptance of “...liberalization in trade and finance as consistent with, and even necessary for, international environmental protection” (Bernstein 2001: 29; cf. Carter 2001: 169). Although this view has tended to dominate political approaches to climate governance, as argued by a wide range of climate analysts (Carter 2001; Bernstein 2001; Dryzek 2005; Mitchell 2008; Scrase et al 2009; Friedrichs 2011), the climate perspective will be characterised here as those that

have opposed this position. As such this perspective is concerned with openly critiquing current energy policy in that it is understood to be incapable of delivering on climate mitigation goals. This perspective is, therefore, interested in arguing for, and bringing about, political change, albeit there remain differences in ideas about how to change.

Like pro-market perspectives on energy, climate groups understand the world to be inter-connected and inter-dependent, but with a focus on the ways, both positive and negative, that mankind's actions reverberate around the living planet. Energy is clearly understood to have an important role to play in climate change and clean energy is understood to be something which should be made available for all. Estimates are that the global energy sector contributes almost 60 percent of the world's annual greenhouse gas emissions (Blyth 2010: 133). On the other hand, however, energy policy, in pursuit of a low carbon energy sector, might also provide the possibility for mitigating climate change (Campbell 2005; Scrase et al 2009). Energy use and climate change are, therefore, perceived to be inextricably inter-related within the deeply interconnected world, the 'global commons' (Vogler 2000). It is, in addition, considered increasingly impossible to disentangle questions of energy policy from questions of climate change policy (Carter 2001; Held 2006; Giddens 2009; Scrase et al 2009; Blyth 2010). This viewpoint has been encapsulated well in the claim that "...climate policy is energy policy..." (Scrase et al 2009: 3).

3.2 Energy Events in the 2000s: Climate Interpretations

Generally speaking although some within this group define the energy crisis as a current event (Helm 2005a), others see it as part of a larger problem analysed and discussed, with increasing frustration, for decades (Bernstein 2001: 29-47; Giddens 2009: 49; cf. Jacobs 1991; Carter 2001 and 2007). The energy crisis is understood largely within the context of the ongoing warming of the planet partly due to the use of fossil fuels to power modern society. Reference is often made to key events such as the 1972 Declaration of the United Nations Conference on the Human Environment (UNCHE) and the 1992 United Nations led Earth Summit, where world leaders had convened to discuss and attempt to effectively address global environmental concerns, but which since then have produced little real change in policy or behaviour (Vogler 2000; Bernstein 2001; cf. Held 2006; Mitchell 2008; Friedrichs 2011).

Whereas the pro-market perspective might present the causes of the current energy crisis as being external to current systems of energy governance, the ‘climate’ perspective often highlights problems of an endogenous nature. The modern system of growth and accumulation, including current forms of globalisation, is critiqued in that it has, through its emphasis on economic growth over other variables, exacerbated climate change (Carter 2001: 63; Paterson et al 2003; Held 2006: 160; Newell 2008; Mitchell 2008; Newell and Paterson 2010). The current world system, which underpins a ‘hegemony of the market’, has been criticised as being capable of little more than offering market solutions to environmental problems and being, in this sense, ineffective (Carter 2001; Mitchell 2008; Scrase et al 2009; Kern 2009). Held goes on to suggest that by widely promulgating a deep distrust of positive roles for government in core areas of socioeconomic life, the Washington Consensus viewpoint has further undermined the ability of governments to work together to address energy and sustainability concerns (Held 2006: 161).

Steven Bernstein takes this relationship between energy and environmental governance systems and wider political systems further. He also perceives there to be a wider system of governance, labelled the ‘economic paradigm’, which creates problems for progress towards establishing a sustainable energy system. This paradigm had been winning out over scientific and other environmental ideas about how to govern the environment for decades in a process which he terms ‘the compromise of liberal environmentalism’ (Bernstein 2001: 187). Specifically he argues that

...economic ideas overshadowed scientific ideas and ecological thought in producing normative compromises at key junctures in the evolution of the environmental norm-complex over the last thirty years (Bernstein 2001: 190)

Examples of policy outcomes of this kind of compromise can be found in recent analyses of UK energy policy (Helm 2003; Mitchell 2008). Catherine Mitchell has pointed to the dominance of quantitative over qualitative analysis within UK government institutions concerned with energy and to the dangers of “ideological lock-in”. This has meant that the bulk of analysis has failed to assist in making policy decisions related to judgement calls or, just as importantly, to highlighting progressive change required to the system of governance (Mitchell 2008: 1). Dieter Helm had also previously concluded that the inability of UK energy policymakers to think outside of the neoliberal energy ‘box’ had resulted in policy that was no longer fit for purpose

(Helm 2003: 402). It has thus been observed that an economic paradigm, based on pro-market ideas, had been sufficiently institutionalised such that although the need to reach climate change goals could be identified, more productive methods of achieving this often lay outside of accepted ‘normal’ practice.

3.3 Climate Responses to Crisis

As already asserted above, this perspective on energy and crisis has been concerned with the urgent requirement for change in how energy is governed, and used, on a world-wide basis. That is not to say that all within this broad church would recommend the same specific policies - there are deep divides between those who might recommend nuclear as a clean, low carbon, and sustainable energy source (Helm 2007a; Giddens 2009) and those who would not (Held 2006; Mitchell 2008: 122). This is a core ongoing split within current energy policymaking circles.

Like those writing from the geopolitical perspective some experts start with the recommendation that governments should become more directly involved in energy governance in order to establish sustainable energy systems (Carter 2001; Held 2006; Mitchell 2008; Giddens 2009).¹² This is not least because of the view that markets, left to their own devices, would deliver gas fired power stations to the exclusion of all else in response to perceptions of crisis given that that would be perceived as the economically efficient answer (Fells 2001: 1). This perspective often points to the very urgent need to build energy, and climate, governance capacity both domestically and internationally (Stern 1987; Carter 2001; Helm 2005c; Held 2006: 159; Giddens 2009;).

A range of specific recommendations to improve energy usage, thereby slowing the pace of global warming, have been suggested including the implementation of an effective national sustainable energy strategy (Carter 2001; Giddens 2009; Scrase et al 2009). Such a strategy is understood as being capable of going some way towards reinstating collective thinking on sustainable energy to counter-balance the short-term outlook of the markets for energy (Giddens 2009: 128). Other, more specific, policies include an increase in direct government investment in renewable energy technology research and development (Mitchell 2008: 214; cf. Kern 2009), improved market

¹² Antatole Kaletsky has suggested that the climate narrative, given its opposition to the current economic paradigm and recommended role for the state in governance, is often associated with ‘the left’ (Kaletsky 2010).

regulation (Jacobs 1991: 136-138), feed-in tariffs to provide generators of renewable energy with a 'risk free' deal (Mitchell 2008), taxation of non-sustainable energy usage (Sentence 2009; Green Fiscal Commission 2009), and renewed usage of qualitative alongside quantitative analysis (Hope et al 1987; Mitchell 2008). All of these suggestions infer, to a greater or lesser degree, less devolved and or independent energy governance.

Again, with specific regard to ways in which energy is governed, others have observed that energy and climate policy should be reached through an inter-linked process (Carter 2001; Greenpeace 2006; Held 2006; Giddens 2009; Scrase et al 2009; Blyth 2010: 133). As of the year 2000, the starting date of the period of analysis covered in this thesis, responsibility for climate policy lay largely within the Department for the Environment, Farming and Rural Affairs (DEFRA). Responsibility for energy policy lay within the Energy Directorate of the DTI.

4. Energy, Paradigms and Structural Change

Given the consensus across perspectives that energy has been in crisis for much of the first decade of the 21st century, it is unsurprising that there has also been much talk of change. Chapter two will explore in some detail conceptual linkages between perceptions of crisis and political ability, and willingness, to change, but here it might just be worth mentioning that such links are possible. This can be done with reference to Colin Hay who has suggested that crises should be understood not just as moments of considerable uncertainty, but also as moments of "decisive intervention" (Hay 2001: 196).

4.1 *The Paradigm Come Back*

What has complicated questions about how to respond politically in energy's renewed time of crisis, or of how to intervene decisively, is the existence of the above-mentioned variety of ways in which the crisis has been understood. One way of claiming that there are different ways of understanding, and doing, things is to talk in terms of paradigms. Paradigms are often used in political science to denote certain, distinct, ways of thinking theoretically (Hall 1993; Hay various; Blyth various; Oliver and Pemberton 2004; Keohane 2009; Wood 2011). The term paradigm has very recently started to appear in analyses of energy, and of climate change, to denote fixed ways in which energy has

been used and governed, often specifically within the context of wider paradigms (Carter 2001; Helm 2003; Stanislaw 2004; Yergin 2006; Clarke 2007; Mitchell 2008; Nuttall and Manz 2008; Klare 2008; Jegen 2009; Kern 2009; Homer-Dixon 2009). This body of work is focused on describing the ways in which the context within which energy governance takes place is changing, often by pointing to global warming, peak resources, or energy supply insecurity.

Given that this thesis is concerned with the alteration of the PEPP it is interesting to note that there are high profile pro-market energy analysts who have recently suggested that a new energy paradigm needs to emerge (Stanislaw 2004 and 2006; Yergin 2006). Daniel Yergin and Joseph Stanislaw have been involved politically in the ‘marketisation’ of energy, partly as Government advisors, both in the UK and US. Joseph Stanislaw served as senior economist at the International Energy Agency (IEA) and together they founded the Cambridge Energy Research Associates (CERA), a world leading energy consultancy firm. They are co-authors of ‘The Commanding Heights: the Battle for the World Economy’ (Yergin and Stanislaw 1998). Both analysts have, however, recently proposed new governing procedures capable of understanding energy, and its security, as being lodged within larger relations amongst nations and as capable of acting accordingly (Yergin 2006: 71; Stanislaw 2006: 10). Neither, however, put forward suggestions for particularly profound change, although given their previous positions in support of the neoliberalisation of energy in the 1980s, changes that might seem small to a climate analysts might to them seem more significant.

Analysts writing on energy, from a climate perspective, have, as already suggested, had more to say about specific ways in which energy governance should change. From this perspective a major transformation needs to take place in how energy resources are used and utilised around the world. Pablo Gonzales has concluded that the current “economic paradigm”, in which the “scarce factor of production” has been capital, is fast moving to one where the scare factor will become natural resources (Gonzalez 2006: 12). What needs to change therefore is the economic paradigm given that it is based on growth without due consideration for environmental and social consequences (see also Carter 2001 and 2007; Newell and Patterson 2010; Friedrichs 2011; Garner 2011). Carter references the existence of an “...alternative paradigm of sustainable development...” which has not been pursued due largely to the compromise between

neoliberal forms of economic governance and climate change ideas (Carter 2001: 169; cf. Bernstein 2001).

Across the energy paradigm literature, the term paradigm tends to be applied in an undefined manner, assuming that the audience will understand what a paradigm is.¹³ Some sort of inter-subjective meaning seems to be assumed between author and reader thereby suggesting that the term paradigm is widely understood and recognised. What is missing, therefore, is much substantial definition both of what a paradigm is, and of what a paradigm shift is and how and why it might occur. This literature often takes as its subject either global or regional energy systems, making conclusions that are general across broad geographical boundaries.

With regard to UK energy governance processes more specifically, however, a few analysts have recently characterised UK energy policy as being influenced by neoliberal ideas which deeply constrain its ability to respond to climate, and energy security, problems as they arise (Helm 2003; Rutledge 2007; Mitchell 2008; Kern 2009). In his stinging critique of energy governance under New Labour Ian Rutledge describes a “Lawsonian paradigm” underpinned by a particularly fundamentalist view of the role of competitive markets in achieving objectives (Rutledge 2007: 901 and 903). Florian Kern, in his recent PhD thesis, applies discursive institutionalism to great effect to reveal ways in which neoliberal ideas about energy governance have affected how energy ‘innovation policy’ has been devised (Kern 2009). Kern’s analysis highlights, in detail, the way in which personnel working within innovation policy, particularly at the UK’s Carbon Trust, openly reflected ideas about government “...doing as little as possible...”, “...giving the market room to breathe...” and allowing for markets to deliver (Kern 2009: 124-5).

Catherine Mitchell’s recent book refers to UK sustainable energy policy as having been devised very much within the context of wider UK economic governance practices. The book starts with a definition of the UK’s sustainable energy policy as reflecting the character of the “...underlying political-economic paradigm” (Mitchell 2008: 1). This

¹³ This observation is similar to that made by Flinders and Buller on depoliticisation: “...scholars who have employed the concept as a central element of their work... write with a fluidity and verve that clearly denotes some kind of shared understanding... but yet never seeks to explicate the core essence of the term” (Flinders and Buller 2006: 295).

political-economic paradigm is further defined as a Regulatory State Paradigm (RSP) with reference to the work of Michael Moran (Moran 2003). This paradigm suggests that Government should “...provide a regulatory framework which ‘steers’ towards a defined general direction and then leaves it to the market to select the means to reach that end...” (Mitchell 2008: 1). Much of the rest of the book is given over to articulating the ways in which this politico-economic paradigm has restricted change and the development of effective sustainable energy policy in the UK. Mitchell suggests a range of solutions, many of which would require a break with existing practices.¹⁴

These pieces of research are highly significant as they are the first to suggest that the parameters of UK energy policy, or sub-sectors of it, have been severely restricted within specific policy paradigms. In that all three focus on consistency of policy over change they do not, however, include analysis of actual changes ongoing in wider energy policy, nor do they define ways in which paradigms can be changed.

4.2 Policy Paradigm Change

There is an equally small group which has written on questions of paradigm *change* in energy policy (Helm 2005a and 2007a; Jegen 2009; Froggatt and Levi 2009; cf. Rutledge and Wright 2010). Although this small group of work agrees that the starting position from which to evaluate change is a governance system heavily influenced by ideas about privatisation, liberalisation and competition, conclusions about change differ. These range from suggestions that a paradigm shift has already taken place (Helm 2005a and 2007a; Keay 2010), through those that those that understand key elements of the policy process to have been changing (Jegen 2009; Froggatt and Levi 2009), to those that recognise and elucidate a wide range of policy failures challenging the pro-market energy model (Rutledge and Wright 2010; Rutledge 2010).

Dieter Helm, a climate change economist and UK Government advisor, has produced the most in depth work on paradigm change in energy policy (Helm 2005a and 2007a). His analysis of OECD energy policy is concerned less with the wider system of economic governance as representing a paradigm, as was the case with Mitchell’s book, but with energy governance in particular as constituting a policy paradigm. The

¹⁴ Changes suggested include government targeting of particular technologies and policies that intervene directly in the market, such as priority access for renewable, not just ‘clean’, technologies to generation (Mitchell 2008: 211-213).

characterisation of the PEPP used in this thesis will suggest elements which relate it to the wider system of economic governance, but also elements, in the form of ideas about energy and of physical institutions of governance, that are particular to the energy policy paradigm.

The analysis starts with a brief definition of a paradigm, again with reference to Thomas Kuhn's seminal work on the philosophy of science, as "...a coherent pattern of research organized around commonly shared theoretical propositions and models" (Kuhn 1962 in Helm 2005a: 1). Helm proceeded by suggesting that paradigms can exist also in politics. Helm's 2005 and 2007 articles both paint a picture of an energy policy paradigm, which dominated policymaking across the OECD during the 1990s, and which was built upon ideas about liberalisation and privatisation. However, although Helm has referred to the way in which a policy paradigm is internally consistent and therefore provides a preferred solution to problems he does not explicitly offer any detailed definition of what a policy paradigm is or how it operates (Helm 2007a: 32).

Helm then continued by proposing that a "...paradigm shift..." can be understood as "...the emergence of an alternative framework of common and shared analysis..." (Helm 2007a: 9). Paradigm shifts can be understood to have occurred when

...the historical context changes to a sufficient degree making it increasingly hard to reconcile the existing mindset of policy-makers with the evidence leading eventually to new objectives and new policy instruments (Helm 2007a: 9)

In addition, paradigm shifts in policy are put forward as also requiring a change in ideas in response to changing contexts (Helm 2007a: 9).¹⁵

The energy policy paradigm shift that Helm claims took place seems to be more concerned with changing objectives than anything else. He suggests that the primary focus of energy policy changed from competition, and associated cost minimisation, to climate change and security of energy supply (Helm 2007a: 18). However, although it is inferred in the title of each piece, both of which reference 'the new energy paradigm', it is not clearly argued within the body of each work that an energy policy paradigm shift has indeed taken place (Helm 2005a and 2007a). By concluding that policy objectives have changed, whilst arguing that the instruments of policy have not yet

¹⁵ This is done without reference to Peter Hall's 1993 article on policy paradigms and paradigm shifts although Helm's definition does appear similar to Hall's.

changed, the title is left somewhat stranded from the text (Helm 2007a: 32). By Helm's earlier, fleeting definition of a policy paradigm shift both new objectives and new policy ideas and instruments are required (Helm 2007a: 9).

In some recognition, however, of the temporality of, and of constraints on, change Helm does posit that any change to the existing energy policy paradigm takes place as part of an ongoing process which will be problematic due to the existence of "...institutional and structural constraints to a new paradigm in energy" (Helm 2005a: 14). This is perhaps why Helm proposes that part of the problem of devising new instruments of energy policy rests on the question of how to marry up "...the new objectives with the liberalized markets" (Helm 2007a: 32). In this Helm has not been posing questions about how to alter the underlying market-based model and the institutions which it has produced, despite the new objectives to which policy has been set.

Maya Jegen's work on EU energy paradigm change has a broader focus both in that her analysis covers climate and energy security policy. She has suggested, in line with Helm, that EU energy policy has changed in that its objectives are now much more oriented toward reducing carbon dioxide emissions and ensuring energy security (Jegen 2009: 18).¹⁶ In conclusion, however, she remains ambiguous as to whether a 'genuine' paradigm shift, outlined yet again with a brief reference to Kuhn's scientific revolutions, took place (Jegen 2009: 19). It could be argued, as with Helm's articles, that by failing to provide any distinct definition of a paradigm shift it has been difficult for this analysis to really measure whether or not one has taken place.

What is apparent from all the analyses of energy paradigms and of change is that reference is being made to a range of different types of paradigms. This might be related to the observation that, with the exception of Mitchell, Kern and Rutledge, the energy paradigm research has tended to proceed in a somewhat broad fashion by generalising across a number of countries and political systems. This again seems problematic in the light of various assertions that energy, albeit security, can mean different things at different points in time and so too to different groups at the same point in time (Jegen 2009; Ciuta 2010). Building on this small emerging literature this

¹⁶ Jegen specifically suggests that Russia's actions around the mid-2000s were responsible for 're-politicising' energy in Europe five (Jegen 2009: 18) – an idea to which this thesis will return in chapter five.

thesis will take the notion of a paradigm shift in energy policy as a starting point for the analysis of one policy paradigm, the PEPP.

Conclusions

The focus of this chapter has not been on trying to establish which perspective is ‘right’ or ‘wrong’ in their interpretation of the political economy of energy in the 2000s, but to build a profile of each perspective on energy in terms of how they understand and represent crisis, what they recommend in response to it, and the degree to which they understand change to be taking place. Clearly, as already mentioned, there is some overlap between each perspective but sufficient generalisations exist in their normative positions and/or their theoretical approaches to argue for separation. The three energy perspectives will underpin much of the rest of this thesis in that each perspective is understood to have a role in the process of change to UK energy governance and policy both in terms of facilitating and constraining change.

It appears, on reading the analysis on energy paradigms and change, that it is at best ambiguous whether or not an energy policy paradigm shift is taking, or has taken, place. Academic work on energy paradigms does appear to consistently suggest that UK, and EU, energy policy has been increasingly influenced by ideas about liberalisation, deregulation and competition over a period of decades (Helm 2003; Thomas 2006: 583; Mitchell 2008; Jegen 2009: 1; Lesage et al 2010: 6; EC 2011: 14). In addition, what can be read from this literature is some similarity in the consideration of the objectives to which energy policy is set. Objectives appear to have been re-ordered such that the security and sustainability of energy supplies appear to have emerged as primary, ahead of the creation of liberal and competitive energy markets (Helm 2005: 2; Mitchell 2008: 2; Jegen 2009: 2; cf. Kuzemko 2012 (forthcoming)).

There has been a remarkable increase in debates about energy centred on energy security and climate change as issue areas which have arguably served to repoliticise energy and to raise a wide range of questions about change. Although there is considerable agreement, across perspectives, that change is required there appear to be quite deep differences about the degree and type of change necessary.

Chapter 2: Conceptualising Change and the Pro-Market Energy Policy Paradigm

Introduction

This chapter sets out the conceptual framework through which this thesis will develop the analysis of UK energy governance in the 21st Century. As already noted, there has been a widespread perception within academic, government and wider circles that we have been living through a period of crisis in energy for much of the 2000s. Renewed emphasis has emerged in the UK on questions of international energy security, perceived often as insecurity of supply, alongside growing political traction behind arguments about climate change and the need to reduce carbon dioxide emissions.

The conceptual framework is based predominantly on ideational strands of institutionalism, proposed by Colin Hay as a ‘synthesis’ of historical and discursive variants of neo-institutionalism (Hay 2001: 193). The framework will present first of all a clearly defined concept of a policy paradigm with reference to Peter Hall (Hall 1993). It will then build on Hall’s concept of a policy paradigm in outlining five ‘levels’ of governance within the UK pro-market energy policy paradigm (PEPP) against which change can be measured. An explanation of the PEPP, why certain energy decisions were made over others and some of the social, political and economic outcomes of those decisions, provides us with a deeper understanding of the context within which change occurred in the 2000s.

It will further be argued, through reference to other new institutionalist concepts, that the PEPP had become well sedimented in the UK by the start of the 2000s. It will be argued not only that energy had become quite significantly depoliticised over time (cf. Kern 2009), but indeed that various processes of depoliticisation had actively served to embed and cement the PEPP (cf. Hay 2007). These processes will be introduced here as ‘marketised’, ‘deliberative’, ‘technocratic’ and ‘secretised’ depoliticisation. The depoliticised nature of the PEPP, along with the policymaking mindsets inherent within Hall’s notion of a policy paradigm, help to explain the degree to which, and ways in which, the PEPP provided resistance to change (Hall 1993; Hay 2007). If such a

sedimented system can be seen to have changed profoundly, and in a lasting manner, then this can be understood as significant.¹⁷

Having established a starting point for the analysis of change this chapter will supplement the concept of policy paradigms, and the PEPP in particular, by considering *how and why* change of profound proportions can take place to such a well sedimented energy governance system. Much of the energy paradigm and environmental literatures claim that political change is required, but also despair over the lack of change over time (Carter 2001; Bernstein 2001; Stanislaw 2004; Gonzales 2006; Mitchell 2008). What is needed in order to consider how and why change takes place is a conceptualisation of processes of change. This will be formed by considering the role of narratives, based partly on perspectives outlined in chapter one, as catalysts for and enablers of change (Hay 1996 and 2001; Blyth 2002 and 2003). Understandings of the role of narratives in change will be supplemented by arguments about repoliticisation (cf. Wood 2011), ‘re-thinking’ and securitising moves (Wæver 1995; Buzan et al 1998).

1. Policy Paradigms and Ideas

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else (Keynes 1997: 383)

The conclusion of chapter one observed that among the failings of the current, albeit nascent, energy paradigm literature is a lack of any well-defined explanation of what a paradigm is. With the notable exception of Catherine Mitchell’s work on sustainable energy policy, paradigms remain largely emblematic, used as heuristic devices to signify a particular way of doing things (Stanislaw 2004; Gonzales 2006; Clarke 2007; Klare 2008). This chapter is an important step towards being able to characterise a specific ‘pro-market energy policy paradigm’ (PEPP).

As already noted at the end of chapter one, Catherine Mitchell and Dieter Helm have gone the furthest in trying to define paradigms by providing us with some, albeit brief, descriptions of some of internal machinations. Without specifically referring to ideas as

¹⁷ Particularly in that UK energy policy had been actively held up as a model which other states wishing to ‘reform’ their energy sectors should follow (IEA 2006; Thomas 2006; cf. Interviews 1 and 15).

influential variables within political processes, Catherine Mitchell has put forward the notion that UK sustainable energy policy reflects the *character* of the overall socio-economic paradigm, referred to as the Regulatory State Paradigm (RSP) (Mitchell 2008: 1).¹⁸ Mitchell is referring, however, to one specific paradigm, not a definition of paradigms per se. She notes that the RSP "... supports the status quo and the momentum of the current energy system" (Mitchell 2008: 50) and observes throughout the book that the character of the political paradigm has to change in order for successful sustainable energy policies to be pursued (Mitchell 2008). However, by failing to define what constitutes a political paradigm more generally or how it can be that paradigms have a certain 'character', it becomes harder to also conceptualise how it might be possible for such change to take place.

1.1 Policy Paradigm as Interpretive Framework

Given the range of different paradigms associated with energy, which have recently emerged within the energy literature, providing a specific definition of a paradigm is considered to be fundamental to this thesis. There are, however, a number of other reasons for this. Firstly, as already mentioned, change is considered here as a relative concept (Hay 1999c: 30). As such a full understanding of the UK energy governance starting position, as PEPP, is considered necessary in order to qualify and quantify that change. Secondly, if we remain ignorant of the ways in which a specific policy paradigm operates then it might be problematic to suggest how and why it might be changing. Lastly, it might be possible to argue that some of the political and economic consequences of policymaking, structured within a particular set of ideas, might in turn constitute crisis.

As already indicated in the introduction the definition offered in this thesis of a paradigm is based on Peter Hall's conceptualisation of policy paradigms (Hall 1993). Hall's work is situated within a growing literature which understands policy both as socially constructed and as influenced and structured by sets of ideas (Hall 1993; Berman 1998; Campbell 1998; Wilson 2000; Hay various; Greener 2001; Blyth various;

¹⁸ This thesis agrees with this notion but will ascribe different 'characteristics' to the UK energy policy paradigm.

Oliver and Pemberton 2004; Schmidt and Radaelli 2006; Berry 2008; Schmidt 2008; Larsen and Andersen 2009; Kern 2009; Chwieroth 2010; Mugge 2011; Woods 2011).¹⁹

In an early analysis of UK economic governance Hall observed that there are certain ‘paradigms of politics’ (Hall 1986: 3). This was an attempt at understanding how institutions, taken as formal rules and standard operating practices, structure decision making within certain, broad units of polity. These institutions were understood as more formal than cultural norms but not necessarily derived from any legal standing (Hall 1986: 19). This work also served to “...illuminate the political dimensions of economic management...” arguing that the direction of policy was determined “... not simply by economic conditions but also by a political dynamic...” and as such that policy was not pre-determined (Hall 1986: 20).

Hall built on this concept of socially constructed rules and norms in political practice when he came to define the policy paradigm. His work on policy paradigms furthered the notion that individuals within political institutions were structured in their decision-making but reflected in more detail on how this process takes place and with what consequences. Hall put it this way:

...policymakers customarily work within a framework of ideas and standards that specifies not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing. [T]his framework is embedded in the very terminology through which policymakers communicate about their work, and it is influential precisely because so much of it is taken for granted and unamenable to scrutiny as a whole. I am going to call this interpretive framework a policy paradigm. (Hall 1993: 279)

There is a lot that we can take from this quote when trying to understand what policy paradigms are and how they work. Instead of a paradigm presented as a ‘given’ and left largely undefined Hall’s concept allows us to problematise existing sets of governance structures and to understand affects of ideational contexts on policymaking.

¹⁹ For in depth explorations of the role of ideas as independent variables in political analysis see both Mark Blyth and Sheri Berman who include excellent accounts in the opening chapters of their books, respectively ‘Great Transformations’ and ‘The social democratic moment: ideas and politics in the making of interwar Europe’ (Berman 1998; Blyth 2002; see also Jacobsen 1995).

Hay and Wincott offer a further explanation of the role of ideas in policymaking processes by proposing them as the link between context and conduct, institutions and behaviour or, in other words, as part of the ‘why’ of analysing actions (Hay and Wincott 1998: 953). As such what becomes important is the way in which political actors interpret events and how policy decisions relate to interpretations. This kind of linking up of ideas, about a problem area and how it should be addressed, and political outcomes in the form of policy choices assists us in understanding Catherine Mitchell’s proposition that the RSP has particular “characteristics” (Mitchell 2008:1). These characteristics, which have resulted in certain methods of governing sustainable energy, are the visible outcome of working within a given interpretive framework.

The second observation, that the policy paradigm, or interpretive framework can end up being ‘taken for granted’ is a fascinating notion that will be taken up in more detail in the next section of this chapter. As such policymakers may not actively be aware that their choices are constrained *in this way* as by its very nature an interpretive framework presents choices as ‘common sense’, ‘the norm’ or just simply correct procedure.²⁰ This form of ideational constraint is similar to one of John Campbell’s ‘types of ideas’ that effect policymaking, which he also refers to as ‘paradigms’. A paradigm for Campbell, who draws on historical and organisational institutionalism, is an “...elite assumption that constrains the cognitive range of useful solutions available to policy makers” (Campbell 1998: 385). These result in elite policy prescriptions, or ‘programs’, which help policymakers to chart a clear and specific course of action. As such ideas both enable action, but only action constrained within a range of elite assumptions.

As such, the interpretive framework also allows for high degrees of certainty when addressing complex political and economic issue areas such as energy, and such certainty can allow for stability as well as lack of political or public discourse about such policy areas. This may be what Dieter Helm meant when he suggested that policy paradigms are ‘internally consistent’ (Helm 2007: 9). It can also, however, leave policymakers blind to, or dismissive of, alternative ways of understanding their issue area and other, potentially more effective, methods of achieving policy goals.

²⁰ Policymakers may, however, be all too aware of other constraints such as lack of political will to engage in certain policies, or of lack of public financing sufficient to commit to required departmental resources.

Hall's conceptualisation of a policy paradigm also suggests that policymakers, and those associated with the policymaking process, understand the "...very problem they are supposed to be addressing..." through this interpretive framework. As suggested in chapter one, and as will be outlined in more detail in chapter three, the 'very problem' that UK energy policymakers were addressing was indeed interpreted in a particular, arguably somewhat narrow, way. It will be further argued that the way in which energy was initially conceptualised by the Conservatives in the early 1980s, as a tradable good or commodity, is key to understanding how energy came to be treated politically.

1.2 Legitimacy, Belief and Strategic Language

Lastly, in terms of understanding the ways in which a policy paradigm, in the form of the interpretive framework, is understood to impact upon policymaking, it is worth noting Hall's claim that the "...framework is embedded in the very terminology through which policymakers communicate about their work" (Hall 1993: 279). Steven Bernstein, writing on the evolution of climate policymaking, has also suggested that legitimacy and credibility matter. He observed that "... the question is not whether the norm exists, but the political authority the norm enjoys" (Bernstein 2001: 30). Communication is key here and it is linked to notions of legitimacy in policymaking and to questions of what kind of policy, based upon a certain set of ideas, is considered acceptable. For example, within the context of an embedded policy paradigm, wherein policymakers communicate using specific, often highly technical language, those seeking to advise would need to use similar language to be perceived as credible. As such it can be further argued that the dominant interpretive framework influences who, or which, organisations have credible voices within policymaking processes (Adler and Haas 1992; Kern 2009: 53; Mahoney and Thelen 2010). There is, as such, a considerable degree of authority implied in the way in which Hall has characterised the policy paradigm and associated political and policy practice.

A further question to be raised here is that of strategic action as opposed to acting on the basis of belief. Hall's policy paradigm theory suggests that policymakers actions are informed by a framework of ideas in which they may well believe, if they are overtly aware of its influence. Colin Hay's analysis of political behaviour would also suggest actors pursuing certain courses of action because they genuinely perceive those courses to be correct, or right (Hay 2007: 94). Given the degree to which it is often argued that neoliberal ideas have come to dominate economic, and energy, policymaking over time

genuine belief in these ideas might not be too surprising a prospect. This would relate to Campbell's notion of ideas as elite assumptions constraining action (Campbell 1998: 385) and left unproblematised. Generally speaking, this thesis takes ideas as being influential over policy making in this kind of way.

The other side of this argument suggests, however, that some policymakers, politicians and political protagonists also act strategically in that they use certain language and reference certain ideas in order to appeal to publics in order to get legislation through, or get elected (Geddes and Guiraudon 2004: 335; Kern 2009: 54). This corresponds to another of Campbell's idea types, "frames", which can help policymakers to "... legitimize policy solutions to the public" (Campbell 1998: 385; cf. Geddes and Guiraudon 2004: 335).²¹ This process implies a degree of inter-subjective understanding between policymaker, or other political protagonist, and their audience (Yee 1996: 90-91; Geddes and Guiraudon 2004: 335; Schmidt 2006: 252; cf. Kern 2009: 49). This may not always be the case, but an example of the use of particular concepts on the assumption of inter-subjective understanding is the way in which climate analysts, in seeking to promote renewables, have drawn on the language of national security and energy independence.

2. Depoliticisation and Physical Structures of Governance

This thesis has often referred to the PEPP as being deeply embedded and therefore somewhat resistant to change, which arguably makes any claim of significant alteration all the more meaningful. A good way of coming to understand what is meant by an embedded, or institutionalised, policy paradigm is by starting to think about it as a process that takes place over time. At any particular moment in time certain sets of ideas effectively dominate politics, or more precisely political decision-making, and therefore can be seen as having both legitimacy and authority. Chapter one claimed, for example, that sets of neoliberal ideas had come to dominate both energy, and wider macroeconomic, policymaking in the UK, and beyond. In order to reach such a position of legitimacy within elite circles a policy paradigm, and the ideas upon which it rests,

²¹ It may be worth referencing the distinction made in the 'social movement' literature between 'strategic framing', as political actors framing their discourse in a certain way so as to promote the solutions they propose, and 'ideology', which implies more belief and less strategic use of language (Zald 1996 in Geddes and Guiraudon 2004: 335).

would first have to have been subject to certain social and political processes, often referred to as institutionalisation. In a general sense, Colin Hay has noted that “...paradigms become entrenched both culturally and institutionally” (Hay 1998: 213). Others have observed that ideas, when they become embedded in institutions, be they political, economic or social, tend to become more established and harder to challenge and therefore change (Jacobsen 1995: 285).

We will take here the example of the establishment of neoliberal and public choice ideas as influential over political practice across OECD countries, and beyond. There were, according to Colin Hay, two distinct phases of establishing this policy paradigm. The first phase, referred to as *normative neoliberalism*, took place in Anglophone democracies in the 1970s and 1980s and was highly politicised in that neoliberal ideas came to dominate political debates. The second phase, *normalised neoliberalism*, was by contrast a period of diffusion and consolidation that extended neoliberal economic governance beyond Anglophone democracies in the 1990s (Hay 2007: 98). This second phase is understood here as that within which the dominant neoliberal ideas became embedded within political practice – therefore as part of the relationship between theory and praxis.

2.1 Depoliticisation as Institutionalisation

Florian Kern has briefly suggested that energy innovation policy in the UK could be considered as be ‘depoliticised’ in that responsibility is passed on to the private sector, but without much discussion or analysis of what is meant by the term or of its consequences (Kern 2009: 131). Depoliticisation is understood here as being capable of taking a policy paradigm from an accepted normative position, based on a certain set of ideas, to an established political system which could be described as ‘normalised’ (cf. Buller and Flinders 2005; Hay 2007: 98). Specifically ‘depoliticisation’ has been used to refer to the passing of responsibility, and accountability, in a given issue area away from government (Burnham 2001; Buller and Flinders 2005; Flinders and Buller 2006; Hay 2007; Mügge 2011).²² Although these decisions can result in a ‘de-politicised’ issue area the decisions themselves remain highly political (Flinders and Buller 2006: 307).

²² This is a reference to depoliticisation ‘type 1’. Hay also presented a ‘type 2’, which involves further movement into the ‘private’ sphere, but this type will not be utilised here (Hay 2007: 85).

Flinders and Buller suggest that depoliticisation is something of a misnomer in that the politics remain “...but the area or process through which decisions are taken is altered” (Flinders and Buller 2006: 296). In this respect we can turn to Hay’s suggestion that depoliticisation can take one of two general forms. The first is the displacement of responsibility from governmental to public or quasi-public *authorities*, which works particularly well for subjects that can be considered as ‘technical’ (Hay 2007: 82).²³ This form will be referred to in this thesis as ‘technocratic’ depoliticisation. With regard to the institutionalisation of the PEPP, ‘technocratic’ depoliticisation can be used to refer to the process whereby the Ministry of Energy was disbanded and responsibility for energy policymaking was passed to an Energy Directorate within the Department of Trade and Industry (DTI) and to ‘independent’ regulators. As time passed energy became increasingly viewed as a ‘technical’ matter suitable to the rigorous quantitative analysis of experts at the DTI and Ofgem, mostly economists, rather than elected representatives of state.

The second form that depoliticisation can take is the “... off-loading of areas of formal political responsibility to the market”, or ‘marketised’ depoliticisation in the terminology of this thesis (Hay 2007: 82). This form can likewise be applied to the institutionalisation of the PEPP in that it was decided to privatise energy companies such that supplying energy to British consumers became the responsibility of ‘the market’. Together ‘market’ and ‘technocratic’ depoliticisation can result in an immediate disadvantage for energy politics in the “...potential loss of policy-making capacity that displacement of responsibility may entail” (Hay 2007: 83). This argument is certainly borne out by this thesis, particularly in chapters five, six and seven.

Both these forms of depoliticisation include “... the effective *demotion* of issues previously subject to formal political scrutiny, deliberation and accountability to the non-governmental sphere” (Hay 2007: 82). This aspect of the process of depoliticisation, referred to here as ‘deliberative’ depoliticisation, can be considered most significant under Hay’s definition of politics. He understands that there needs to be active deliberation and collective choice for politics to be representative or for the state to act as an effective guarantor of the public good (Hay 2007: 93; cf. Woods

²³ This is similar in many respects to Flinders and Buller’s ‘institutional’ depoliticisation, but emphasises the degree to which this works for subjects that are considered ‘technical’ and therefore not suitable to those not ‘expert’.

2011). Both ‘marketised’ and ‘technocratic’ depoliticisation help to reinforce ‘deliberative’ depoliticisation by limiting debate about energy policy to small, defined communities which often use terminology which is not accessible to lay communities.

One further aspect of these processes of depoliticisation, particularly ‘deliberative’, is the erosion of trust in governance and political ‘authority’, as identified in a recent study on UK sustainable energy trajectories (Rayner 2009). Publics furthermore can end up, through exclusion from debates, becoming disengaged with topics and distrusting motives for policy. This is something which Jonathan Stern warned about in a 1987 article about the exclusion of energy from public policy debates both between elections and at times of National Elections (Stern 1987: 498).

Hay further argues that the tendency for all the above forms of depoliticisation to be pursued under New Labour has been underpinned not only by the growing acceptance of neoliberal ideas but also of public choice theory (cf. Interview 20). In developing a “science of political failure” this theory has taken neoliberal ideas about the role of government one step further by positing that the state holds limited capacity to govern, and that public servants are self-serving (Hay 2007: 96). Putting these ideas about the role and capacity of the state into political practice has served as a method of more deeply embedding the neoliberal economic paradigm by distancing the state from deliberation, active decision-making and the provision of certain goods. Furthermore, public choice theory has served to further institutionalise and legitimate the idea of a limited role for the state by pronouncing neoliberalism the only feasible economic paradigm in an era of globalization. In doing so it has effectively both depoliticised neoliberal political practice and rendered it ‘non-negotiable’ (Hay 2007: 98).

Dieter Helm claims that both Conservative and New Labour politicians had actively sought to remove energy from politics, making it an ‘economic’ subject:

From the early 1980s, British energy policy, and its associated regulatory regime, was designed to transform a state-owned and directed sector into a normal commodity market. Competition and liberalization would, its architects hoped, take energy out of the political arena... Labour shared this vision and hoped that energy would drop off the political agenda.... (Helm 2003: 386)

This thesis understands energy to have been, at least temporarily, quite successfully depoliticised by 2000. This is not to say, of course, that it did not face any contestations

or challenges, but that the PEPP seemed to evolve in such a way that these challenges had been neutralised. As Flinders and Buller point out, even post the delegation of responsibility and accountability, politicians can still be exposed to pressures which cause issues to be ‘re-politicised’ (Flinders and Buller 2006: 296).

2.2 Governance Institutions

Governance institutions, once formed, can further reinforce a policy paradigm, and the ideas upon which it rests, limiting the entry of new ideas. It has been suggested that the way in which a system is organised can allow or restrict “...the access of social groups to political leaders and bureaucratic officials” (Yee 1996: 92). The way in which institutions are constituted can, thus, “...set the parameters of what people talk about as well as of who talks to whom in the process of policy-making” (Schmidt and Radælli 2004: 197). This can refer both to who is hired but also to who may offer credible information and to assigned mandates, as already suggested in section 1.2 above. Specific hiring practices can mean that only individuals who have been educated to interpret meanings in a similar, or appropriate, way are offered employment within a given institution (Adler & Haas 1992; see March & Olsen 1984 reference in Mahoney and Thelen 2010: 5). Such individuals may just naturally present as being ‘qualified’ and, or, ‘right’ for the job.²⁴

The proposed tendency within formal institutions to hire likeminded, or appropriately educated, individuals can be further reinforced by specific training once inside an institution, training that can lead to “...institutionalised subjects and institutional environments” (Hay and Wincott 1998: 954). As will be seen in more detail in chapter three this has very much been the case with employment and training structures within the DTI. Within the DTI, those hired to research energy have generally come from economics or statistics backgrounds (Interviews 1 and 15). Physical institutions of government, run by groups of likeminded experts, can be further reinforced by processes of ‘technocratic’ depoliticisation which serve to isolate “...policy making from public debate and democratic scrutiny” (Mügge 2011: 189).

²⁴ Helm claims that Nigel Lawson as Energy Minister made strategic decisions in that likeminded individuals were chosen to join his team: “Lawson, like Thatcher, put particular emphasis on choosing the right individuals to carry out his policies. He wanted to find managers who were ‘one of us’ ... executives were to be chosen with a mind to the political objectives as much as their managerial competence.” (Helm 2003: 65)

Both Mitchell and Helm have referred to the ways in which narrow analytical methodologies adopted, and in particular a focus on quantitative over qualitative analysis, have resulted in missed opportunities to develop and improve UK energy policy (Helm 2003: 395; Mitchell 2008: 31). Mitchell refers to the ways in which a focus on economic variables leaves policymakers and analysts blind to non-economic factors, such as human consumption and behaviour, and to policy instruments blind to any preference for type of fuel source, including renewables (Mitchell 2008:31).

2.3 The Five Constituent Levels of the PEPP

Policy paradigms have often been used to refer to macroeconomic policy (Hall 1993; Hay 2001; Blyth 2002; Oliver and Pemberton 2004), but they have also been used to explore other areas such as Welfare, and even ‘drinking’, policy (Greenaway 1998; Greener 2002; Larsen and Andersen 2009). According to Hall, however, policy paradigms are not as strong or influential in all policy areas, as they have been in macroeconomic policymaking, but they are relatively strong in areas which involve highly technical issues as well as a body of specialist knowledge, such as energy (Hall 1993: 291).

According to Hall different policy paradigms, or interpretive frameworks, also lead policy-makers towards different methods of governing. He understood the policymaking process as being made up of different variables:

(t)he overarching goals that guide policy in a particular field, the techniques or policy instruments used to attain these goals, and the precise setting of these instruments
(Hall 1993: 278)

The goal, or objective, of energy policy under the PEPP in 2000 was the secure, (cost) efficient and competitive supply of energy to UK households and corporations. The principal methods of achieving this objective were centred initially around the long process of privatising and deregulating the sector, and later around the construction of a new regulatory framework which would effectively “...steer towards a defined general direction... [but] leave it to the market to select the means to reach that end...” (Mitchell 2008: 1). Specifically, as opposed to the previous policy of ‘planning’, markets would now determine the price and quantity of energy supplied (Helm 2005a: 7). Once established the regulatory framework become the principal instrument of policy which

would come to be managed not by any government department by the independent regulator, Ofgem.

It is argued here, partly along the lines of Hall’s variables, outlined above, that it is possible to separate the PEPP out into five different levels of analysis, which are demonstrated in Table One below. Each level is taken as important in itself in understanding specific ways in which the PEPP operated. Table One, in addition, suggests some specific ways in which each level of the PEPP influences structures of energy governance, and each other. This represents, therefore, the working definition of the UK energy policy paradigm as it stood in 2000 against which change can be measured and understood. As the thesis progresses, in chapter four, it will be possible to fill in more detailed characteristics of each level of the PEPP.

Table 1: The Five Constituent Levels of the Pro-Market Energy Policy Paradigm (PEPP)



As can be seen from Table 1, above, objectives and instruments of policy make up two of the constituent levels of how the PEPP is here defined. These are variables suggested by Hall as being part of policymaking processes (Hall 1993: 278). This thesis is suggesting a new level which will be called the 'physical structures of governance'. These structures are considered particularly important in the sense, outlined in section 2.2 above, that they actively reinforce which ideas are appropriate or legitimate. These three levels are understood to be highly influenced, in turn, by sets of ideas which make up the interpretive framework, or in Hall's terms policy paradigm. The interpretive framework represents ideas both about energy, referenced in section 1.1 above, and about how it should be governed. Suggesting that these sets of ideas, as well as objectives, instruments and physical structures all represent separate levels of governance draws together Hall's conception of a policy paradigm with his variables of policymaking processes.

3. Crises, Insecurity and Repoliticisation: Why Change Commences

Clearly, and as pointed out on a number of occasions, work on policy paradigms and the ways in which they reinforce themselves, suggests continuity over time and relatively conservative and path-dependent politics (Streeck and Thelen 2005: 16; Schmidt 2008: 313; Kern 2010: 53). The next two sections will proceed, however, with a detailed examination of processes of change. Through this examination this thesis will be enabled to understand what the catalysts for change have been, the ways in which change of profound proportions can unfold as well as timescales involved.

Third order change can, according to Hall, be considered to have taken place in the event that all variables of policymaking change. On his definition it is essential that the goals, or objectives, to which policy is set change, if only the instruments or settings of policy shift then third order change cannot be claimed (Hall 1993: 279).²⁵ What is important, in addition, to consider is not just the way in which objectives change but also changes in the hierarchy of goals (Hall 1993: 279). Although Hall has less to say, than some analysts below, about the conditions under which third order change can occur, he does suggest that it can take place during times of crisis or of a change of

²⁵ This reflects some early IPE analysis which suggested that the 'objectives' and 'organisation' of policy are important aspects of the political process (Strange 1988: 16).

government as a result of a general election. He, furthermore, suggests a shift in the locus of authority over policymaking such that supporters of a new paradigm can institutionalise it (Hall 1993: 281). A further critique of Hall's notion of third order change is that it defined largely by changes in variables of policymaking, but does not reflect in any detail on the role of changing ideas (Hall 1993).

Hall's separation of policy, however, into different variables in order to measure whether or not they have changed has suggested an accurate method of assessing change, which this thesis will adopt by measuring change against the five constituent levels of the PEPP. A high degree of departure from previous policy and governance practice will need to be discernable at each level for this thesis to claim policy paradigm change.

3.1 Temporal Aspects of Governance Change

This section has so far initiated the process of finding a definition of change for the purposes of this thesis by looking into the question of how change can be measured, or that of 'degree of change' (Marsh 1999: 10). As well as seeking to measure the degree of change in UK energy governance, by assessing change to all five levels, this section will move on to consider the actual process of change both in terms of causes, *why* change takes place, and in terms of the way in which, or *how*, change takes place.

To do so change will have to be considered as taking place over a period of time. In theoretical analyses of change the distinction is often drawn between those that understand political change as a more discontinuous or revolutionary event and those that understand change to be a more continuous or evolutionary process (Marsh 1999: 10; Hay 2002: 150-161; Campbell 2004: 33-35; Mahoney and Thelen 2010: 23-31). Although most of these analyses have considered change as diachronic, in that they take time into account, what separates them is a question of pace and degree of change at junctures in time. Evolutionary change is understood, over time, to be as capable of resulting in profound change as revolutionary change (Mahoney and Thelen 2010). It seems fair to say that both revolutionary and evolutionary conceptions of political change will be relevant at different points in history and for different political systems (Hay 2002: 155). It also seems fair to say that even in 'revolutionary' times there will be some continuities between past and future political institutions, just as there can be large scale change involved in evolutionary conceptions of change.

There is a third notion of change combining aspects of both the revolutionary and evolutionary conceptions of change. This notion, “punctuated evolution”, references contemporary evolutionary biology which points to the punctuated nature of species evolution and the significance of catastrophic events (Hay 2002: 160; cf. Campbell 2004: 34). Hay characterises “punctuated evolution” as

...a discontinuous conception of political time in which periods of comparatively modest institutional change are interrupted by more rapid and intense moments of transformation (Hay 2002: 161).

He goes on to suggest, like Hall, that these intense moments of transformation may well coincide with moments of perceived crisis (Hay 2002: 162). In this way we can understand that institutions of governance can change both incrementally over time, as well as more quickly and perhaps profoundly during periods of punctuation.

Oliver and Pemberton take a very particular line on questions of profound change and time (2004). Their understanding of processes of change is that they can be messy and contingent, not linear, clean cut nor leading necessarily to paradigm shift. They complicate the matter further by suggesting that although profound changes can be revolutionary, often in response to crisis, they do not always result in the adoption of a new policy paradigm (Oliver and Pemberton 2004: 416). This may be partly explained through separating a policy paradigm out into different levels of governance, as done here, and suggesting that each level may change at different points in time. A widely, publically perceived crisis might be understood as providing impetus for change, or revolution, but it may not immediately spark change to all levels of a policy paradigm. As an example, on the level of ‘physical structures of governance’, the UK Energy Ministry was disbanded only in 1992, almost ten years after the pro-market energy paradigm was initially accepted as the replacement for planning.

3.2 Shocks, Perceived Crises and Security

The notion that change can be associated with periods of crisis, uncertainty or shock is common across the social sciences. James Mahoney, an historical sociologist, refers to the distinction between “critical junctures”, which are moments within which new institutions are formed, and periods of stasis (Mahoney 2000: 1). Ann Swindler, a sociologist, draws a distinction between “settled” and “unsettled” times, in which the latter are seen as “periods of social transformation” (Swindler in Mahoney and Thelen

2010:29). In human biology osmotic shock, which is a sudden change in the solute concentration around a cell, causes rapid change (Lang et al 2005) and in economics both ‘technology’ and ‘supply’ shocks, not to mention ‘Shock Therapy’,²⁶ are understood to be causal of change (Klein 2008).

What seems to be understood within all these applications of ‘shock’ is that the human condition is such that radical change can come about when ‘everyday’ life is perceived as being disrupted causing a reaction in the form of change (cf. Widmaier et al 2005: 748). Such disruptions are reminiscent of Hay’s proposal that large-scale policy change can come about at times of crisis, experienced as rupture and breakdown (Hay 1996 cf. Wilson 2000; Campbell 2004; Widmaier et al 2007; Challies and Murray 2008; Chwieroth 2010), or as Mark Blyth has suggested as “Knightian” uncertainty (Blyth 2002: 31-34). These are both elements of how the events which came to constitute the energy crisis of the mid 2000s, such as the Russian nationalisation of its energy industry and Gazprom’s reduction of gas supply to Europe, were perceived in the UK.

In a continuation of this theme, it is apparent in her chapter on why UK sustainable energy policy has been so resistant to change, that Catherine Mitchell also understands shock as productive of change. She begins by claiming that the UK Government is better at slow, incremental change rather than the kind of rapid change that she, and other climate change specialists, insist is required. She goes on, however, to reference the ability of Government to drive new legislation in the light of a “shocking event” and uses the example of 9/11 (Mitchell 2008: 61).

The shocking event to which Mitchell has referred is one that was understood, and constructed, as potentially threatening the national security of the UK. Analysts within the ‘Copenhagen School’ have also drawn a link between shocking events, perceived as security threats, and political action. According to Buzan and Wæver, key proponents of the Copenhagen School, ‘security’ is

²⁶ The negative impacts of Shock Therapy, particularly on Russia, are well documented in Chapter 5 of ‘Globalization and its Discontents’ by nobel prize economist Joseph Stiglitz. Some of the after effects of adopting economic policy so clearly associated with ‘Western’ economists and political elites, and which was latterly perceived to have failed so badly, has had long lasting social and political repercussions in Russia, and for the West (Stiglitz 2002; see also Challies and Murray 2008 re: Shock Therapy in Chile).

... the move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or as above politics. Securitization can thus be seen as a more extreme version of politicization. (Buzan et al 1998: 23)

Once a subject has been securitised and taken beyond ‘normal’ politics then Government, as security is the language of political priority, is enabled to break with ‘normal’ political practices to address the problem (Wæver 1995: 54-55; Smith 2005: 34; cf. Buzan et al 1998).²⁷

According to the Copenhagen School, however, a subject that has been successfully securitised may well become subject to reduced levels of public discussion or involvement, or to policymaking in secrecy, as well as to heavy handed or militaristic solutions. This is partly because a subject, once securitised, tends to move into the logic of national security where the state becomes more preoccupied with identifying and countering enemies (Wæver 1995: 55; cf. Williams 2003; Floyd 2007; McDonald and Browning 2010).²⁸ As such the subject could be considered as having been, certainly in the ‘deliberative’ sense that has been suggested above, depoliticised through securitising moves. An example of this, or of what we term here ‘secretised’ depoliticisation where policymaking takes place behind closed doors, might be the way in which access to oil is rarely discussed openly by politicians as a reason for war (O’Hanlon 2010).²⁹ This is despite the vast military spending that has been expended principally by the US, but also by Britain, over the years to defend access to oil (O’Hanlon 2010: 60; cf. Bromley 1991).

There are, however, other, recent suggestions within the critical security literature that speaking security does not always have to lead to negative outcomes or to policymaking behind closed doors (cf. Floyd 2007; McDonald 2008: 580; McDonald and Browning

²⁷ As already pointed out, this implies both that there is such a thing as ‘normal’ politics, as well as a rather fixed notion of what ‘normal’ politics is (McDonald 2008). This is taken here to be problematic in that ‘normal’ energy politics of 1980s and 1990s in the UK was very different from what it was understood to be in the 1950s, 60s and 70s.

²⁸ The 2007 paper entitled ‘The Governance of Britain’ stated that ‘Ensuring the security of the nation... is the first responsibility of government’ (House of Commons 2007c: 32).

²⁹ ‘Secretised’ is a fourth way in which we can understand depoliticisation which, although it was arguably part of how energy was governed under the PEPP, was by no means specific to it. As such it is not referred to as often over the course of this thesis as the other three suggested, ‘marketised’, ‘deliberative’ and ‘technocratic’.

2010). This might be portrayed as unsuccessful securitising moves, whereby a subject is spoken about as a security issue, it travels along Wæver's continuum from 'non-politicised' to 'politicised' but not all the way to 'securitised' (Wæver 1995). It is taken here, therefore, as an instance wherein a subject is repoliticised in that it is spoken about as potentially threatened, publics accept this notion, and politicians become more engaged and involved.

This is reminiscent of the claim from Flinders and Buller, referenced in section 2.1, that politicians can be pressured to re-politicise a subject and become engaged again with it (Flinders and Buller 2006: 296) but offers a set of specific conditions under which this might happen. What is important, therefore, about this form of repoliticisation is that fears about the security of a particular subject can equate to a sense that something is wrong, that something needs to be done (cf. Widmaier et al 2005: 749), and that it provides *impetus* for deliberation of, as well as challenge to, existing policy. It also implies that, possibly because security is still understood largely as a public good, Government has direct responsibility to respond (cf. Wæver 1995: 55).

Suffice to say, at this stage, that crisis, which can be experienced in many ways including as shocking or as representing insecurity, can be understood as the moment when agency can win out over structure (Mahoney and Thelen 2010: 494 cf. Hall 1993; Blyth 2002; Schmitt in Williams 2003; Widmaier et al 2005; Chwieroth 2010). This thesis proceeds in the understanding of a connection between ways in which crises are experienced, i.e. as uncertainty, shock and rupture, and conditions for re-politicisation, in a 'deliberative' sense, and change. Such an interpretation is similar to that of Colin Hay who suggests that crisis is not only a time of uncertainty but also "...of decisive intervention..." (Hay 2001: 196), but more specific in terms of the mechanisms involved.

4. Crisis Narratives: How Profound Change Takes Place

As already implied in the concept of securitisation, sociological institutionalists have also suggested that crises are not self-apparent phenomena and as such they need to be narrated and explained (Blyth 2002: 9; see also Hay 1996; Widmaier 2005; Widmaier et al 2005). Chapter one of this thesis referenced three different, although at times overlapping, perspectives on energy governance, reasons for crisis, and related solutions. If we are to link change with crisis, then a widespread perception that crisis

does indeed exist needs to be first established (Hay 1996: 261). A number of events, some of them unexpected, were occurring over the course of the early to mid 2000s which were perceived as having various impacts, including on the production and distribution of energy. This thesis argues, however, that what was important for UK governance change was not only that these events occurred, but *how* these events came to be interpreted in UK elite and public circles (cf. Stone 1988: 106; Hall 1993; Hay 1996; Wilson 2000; Hay 1999).

The suggestion that narratives, or explanations of events, can be important in processes of change relates to arguments put forward elsewhere. This is implicit in the concept of securitisation, above, and is fundamental to discourse analysis which suggests that language not only shapes political action and practices but can become a central form of agency for political actors (Yee 1996; Bulkeley 2000; Geddes and Guiraudon 2004; Schmidt 2006; Hajer in Kern 2010: 30 and 49). Vivien Schmidt suggests that an understanding of discourse can help in understanding how ‘sticky’ institutions can be changed (Schmidt 2008: 313 – in Kern 2010: 53). Much discourse analysis has tended to stress the ‘strategic’ use of narratives, or storylines, in order to achieve political ends (cf. Wæver 1995: 54). This thesis, however, understands narratives to be largely, but not exclusively, populated by sets of ideas in which political protagonists have some degree of belief, i.e. in a more ideological and less strategic sense (cf. Hay 2007: 94).

4.1 Narratives in Times of Crisis: ‘What Has Gone Wrong’

Section 3.2 above has gone some way in explaining links between crisis and change through suggesting that a subject can become repoliticised during times of perceived crisis, particularly if the crisis is perceived in terms of a threat to security at the national level. Part of this process of politicisation involves widespread deliberation and debate once more about a subject, such as in this case energy. If we take Hay’s understanding that politics is deliberation, and informed collective agency, then in order for a policy paradigm to change then there would need to be debate about policy and governance (Hay 2007: 81). Chapter one suggested that energy was increasingly perceived to be in crisis across all three perspectives and energy was once more newsworthy.

During times of uncertainty, however, there usually ensues a search for a credible way of explaining what is going wrong, as well, of course, for solutions. This search may be conducted across and between political groups, the media, public and academic circles

(Blyth 2002: 36; Greener 2002: 164; cf. Hay 2001; Wood 2011). Ideas can be seen as assisting the diagnosis of “what has gone wrong” by providing an explanation for these events and of the uncertainty that surround them (Blyth 2002: 10). Any version of events would need to have elements of Campbell’s ‘frames’ about it in that audiences, elite and public, would need to identify with the problem as explained in order to request, and then support, any given version of change (Campbell 1998; see also Schmidt 2001: 249).

This brings us to the notion that change of paradigmatic proportions comes about based on which ‘crisis narrative’ prevails through the process of change (Hay 1996 and 2001; Blyth 2002). As observed in chapter one, pre-2004 from a pro-market perspective, there was no energy crisis and climate change was understood as being resolved through the extension of existing policies and instruments. By 2005, however, a perception not only that energy was in crisis was emerging, but that it was a security of supply crisis. This narrative, informed by geopolitical perspectives, put forward an interpretation of energy events, based in turn on a particular conception of international relations, that suggested energy was once more a matter for national security. Reputable newspapers, such as the Times and Financial Times, and journals such as the Economist, painted a picture of energy supply insecurity underpinned by overt threats to the British supplies from countries such as Russia (Wagstyl 2006: 3; Ostrovsky 2006: 5; Rodgers 2007: 5; cf. Times 2006). The UK was described, with its move to importer of fossil fuels once more, as increasingly energy dependent and reliant on ‘unstable’ states for supply and subject to energy competition from countries such as China and India.

What ensued was a debate about energy, the like of which had not been witnessed since the 1970s and a repoliticisation of energy, certainly in a ‘deliberative’ sense. Growing academic, elite and media debates in the UK, and across the OECD, bore to witness the emerging dominance of geopolitical understandings of energy (Kalicki and Goldwyn 2005; Eaglesham 2006; Fox 2006; Correlje and van der Linde 2006; DTI 2006 and 2007; House of Commons 2007a; Rodgers 2007; Bird 2007; Klare 2008a; Wicks 2009; Ciuta 2010). This debate also drew on the re-emergence of the ‘peak oil’ debate which served to throw fuel on the fire of fears about being able to access sufficient energy supplies in future (Simmons 2005; Leggett 2005; Kunstler 2005; Heinberg 2006; Klare

2008a). Peak resource arguments, about running out of oil, gas and in some instances water, have a record of wide popular appeal.³⁰

Indeed, it has been argued that for a narrative to prevail it does not necessarily need to be complex or sophisticated, but that it should be cognitively convincing and normatively appealing (Hay 1999: 100; cf. Schmidt 2001 in Kern 2009: 48).³¹ Success, as such, can depend on whether a narrative can appeal to existing, or emerging, norms, values and understandings (Schmidt 2006: 252; cf. Campbell 1998; Geddes and Guiraudon 2004). Simple explanations can be effective in that they can be communicated more easily and widely than complex explanations that perhaps require a more in depth knowledge of the subject to be comprehended. Furthermore, it has been suggested that not all subjects can be as successfully spoken about in terms of security as others (Waeber 1995; Buzan et al 1998; Browning and MacDonald 2010). It is argued here that energy crisis, perceived as threatened national supplies, seems to have struck a chord in the UK with both publics and elites in a way that climate explanations previously failed to.³² The idea of energy supply crisis was not only simple and easy to express, but it also spoke to recent history in terms of narratives that had prevailed during the 1970s crises, and, arguably, to near-term self interest.

In addition to the popular appeal of arguments about threats to energy supplies, it is worth emphasising the role that Russia was perceived as playing. This is in terms of both possibly threatening supplies of gas and oil, particularly post the Russia-Ukraine gas transit dispute, but also in terms of posing a threat to the further marketisation of energy internationally. Language, previously prevalent during the Cold War, and with popular resonance came once more to the fore. Well regarded newspapers ran stories on Russia 'bullying' UK, and other Western, energy companies (Times 2006), and of

³⁰ The notion of running out of energy is a popular one, inspiring terror, which has underpinned much popular fiction and some movies. For examples see movies such as 'Mad Max II'; 'Americathon'; books such as Alex Scarrow's 'Last Light' and Robert Charles Wilson's 'Julian Comstock: A Story of 22nd Century America'; and the video game 'Frontlines: Fuel of War'.

³¹ Psychologist Kevin Dutton suggests that in order to be persuasive an argument needs firstly to be simple, and secondly, to appeal to a person's 'self-interest' (Dutton 2010: 13).

³² In a 2011 survey, by YouGov and Chatham House, security of energy supply was identified by opinion formers as posing as great a threat to the UK's way of life as international terrorism, just behind instability in international financial markets, and well ahead of climate change (Niblett 2011: 23).

Russia now carrying a ‘threat’ rather than a solution, as had previously been assumed, to energy security in Europe (Ostrovsky 2006). Articles were replete with Cold War terminology and reference to Russia’s emerging position as an energy ‘superpower’ based on geopolitically informed assumptions that the possession of large quantities of oil and gas qualified a nation to be internationally powerful (Ostrovsky 2006; Rodgers 2007: 5). Clearly Liechtenstein might not be as successfully interpreted as a threat to UK security as might, for example, Iraq or Russia.

Just as much as perceptions of a security of supply crisis were emerging strongly what arguably, and importantly, also needed to be established was that current domestic political institutions were failing. This is because in the instance that policy failure is credibly claimed an existing policy paradigm may weaken and lose ‘authority’ and/or legitimacy in that it ceases adequately to provide solutions for policy problems (Hall 1993: 280). Oliver and Pemberton refer to the importance of “...mounting evidence of failure...” in weakening the position of the existing paradigm (Oliver and Pemberton 2004: 417). It would not be enough, therefore, for widespread perceptions of a security of supply and climate crisis to exist, but it needed to be proven that the existing paradigm was partly at fault.

This was a more complicated part of the puzzle in that much of the UK energy crisis debate initially tended not to identify reasons for change as being endogenous to the PEPP. Technocrats and much of the media, in the mid 2000s, blamed the perceived security of supply crisis on external actors, largely outside the West, who were refusing to govern energy in the ‘right’ way (DTI 2005; JESS 2006). Others suggested that the external context for energy governance was changing but without laying any blame on current governance practices (Helm 2005a and 2007a). Climate narratives, however, came to play an important role in proving governance failure, and in re-politicisation of energy. From 2008 onwards, in the context of a much more active and widespread debate about energy, it was being increasingly claimed that the UK was missing new climate targets (Van den Horst 2005; Carbon Trust 2006; Greenpeace 2006; Giddens 2009; Jha 2009; Helm 2010). As such arguments that climate change mitigation, whilst maintaining security of supply, could take place without profound change to the existing PEPP started to become more difficult to defend.

What makes the inter-play between geopolitical and climate perspectives within the crisis debate more interesting is the way in which climate groups, particularly those involved in pushing for political change, seized upon the new sense of urgency and fear surrounding energy. Some started to utilise geopolitical language about energy dependency to underpin their arguments about the need to support domestic renewables production and, as such, an energy-security-climate narrative emerges. Although climate groups were still explaining the crisis differently and were suggesting solutions consistent with those explanations, their methods of doing so changed. There is a clear sense of instrumentality in the way that some political activists used existing fears about energy security to further their conclusions about the need for change (Greenpeace 2006; Bird 2007; Ochs 2008; Klare 2008a; Giddens 2009; ITPOES 2010). The instrumental application of geopolitical language suggests, again, that UK audiences were understood to engage much more thoroughly with arguments about energy as a near-term, national security issue, under threat from Russia and others, than with long-term, global climate arguments (BBC 2010).

It is worth making explicit here links, which are inferred above, between elite politicians, technocrats and wider society within the process of establishing a successful crisis narrative. Widmaier et al argue for an inter-subjective relationship between publics and political possibility (Widmaier et al 2007: 755), and Hay argues that "... paradigm shifts... are generally associated... with highly politicized and public debates..." (Hay 2001: 200; see also Hay 1996: 261; Woods 2011: 21). The concept of 'securitisation' also infers that wider publics matter in the processes of political change when it is suggested that Governments can use public fear about an issue to justify a break with normal political practice (Wæver 1995; Buzan et al 1998). The evocative language of geopolitical security, of threat, urgency and dependency, understood as the language of political priority, when applied in such a widespread manner to energy in the UK arguably lent the concept 'mobilizing powers' (cf. Buzan et al 1998; Ciuta 2010).

4.2 Ideas, Narratives and Seeking Solutions: 'What is to be Done'

What has been suggested in the above section is that narratives are here understood to play two specific roles in processes of profound structural change. The first role relates to the establishment of the idea, amongst varied social and political groups, that a crisis did indeed exist. The second relates to the ability of one, or in this case more, narratives

to explain why it exists which might also include claims of policy failure. The combination of these two aspects of narratives within processes of change has resulted, in the empirical case analysed here, in a ‘deliberative’ repoliticisation of energy, to growing deliberation about and to a ‘re-think’ of energy policy and governance. New work by Matthew Wood (2011) suggests that repoliticisation can be considered as an “explanatory concept” of paradigm change in that contestation and the recognition of political agency is an important determinate of change (Wood 2011: 21). This is, in turn consistent with Hay’s notion of politics as including collective deliberation and the possibility for informed political agency (Hay 2007: 93).

For profound change to occur ideas must, in addition to explaining what is going wrong and providing evidence of failure, also successfully assist in diagnosing “...what is to be done...” (Stone 1989; Hay 2001; Blyth 2002; Oliver and Pemberton 2004). Theoretically, legitimate ideas can provide agents with both a scientific and a normative critique of the existing economy and polity but also a blueprint that specifies how these elements should be constructed (Blyth 2002: 37). Hay has argued that a key factor in the replacement of a politico-economic paradigm is the perception that a credible alternative exists (Hay 2001: 102). The alternative, based on different sets of ideas, is usually related directly to the explanation of crisis. For example Hay’s observations about the shift in macroeconomic policy paradigm in the 1980s suggest that by explaining crisis as a lack of ability of government to govern the answer was clear, to pull back the state from its role in macroeconomic governance (Hay 1996).

It is at this point that this thesis, again, finds it slightly difficult to fit the empirical evidence into this conceptual picture. What appears to have happened within the process of change through which UK energy governance has been travelling is that alternative ideas about governance have not cleanly broken with the market model. This takes us to the work of Oliver and Pemberton who suggest that although policy paradigms can travel quite far down the route of profound change, they are not always replaced in the “...battle to institutionalise a new paradigm...”. This can be because, re-iterating Hay’s emphasis on the importance of an alternative paradigm in completing a shift, alternatives are not always perceived to be legitimate (Oliver and Pemberton 2004: 419). It is suggested that policymakers, in this instance, return to addressing problems using the existing framework but with further experimentation with policy

instruments (Oliver and Pemberton 2004: 420). What happened in the UK case appears somewhat different and, if possible, more complex.

The PEPP had, by 2010, experienced change on almost every level. Energy had started to become increasingly understood less as a commodity and more as an important issue for national concern (cf. Miliband 2008; Wicks 2009). The objectives of policy had changed such that energy security and climate change mitigation became primary policy objectives, replacing the objective of creating a competitive system in the hierarchy. The creation of a new institution at the end of 2008, the Department for Energy and Climate Change (DECC), brought energy, and climate, policy back to Cabinet Level deliberation. It can also be seen as the operationalisation of climate ideas that energy and climate policy should be treated as integral to one another (Carter 2001; PIU 2002; Held 2006; Greenpeace 2006; Giddens 2009; Scrase & McKerron 2009). DECC ultimately started to take responsibilities back from Ofgem, the independent regulator, and a greater degree of ‘intervention’ in the market was approved.

A further problematic in assessing the process of change unfolding was that the two prominent, alternative narratives were explaining crisis in different ways, or offering up *different energy crises*. Together they, over time, provided what is theoretically needed for paradigm change to occur: one offered up a sense of crisis and urgency, and the need for political deliberation, whilst the other provided evidence of policy failure. This left policymakers with two alternative sets of solutions based on quite different perspectives about energy, which in other situations, outside of this crisis, they would have found less credible. This thesis will argue that the new governance structure that was eventually pursued represented a still quite marketised system on top of which a range of energy-security-climate ideas were laid. As such it could be argued that the new governance structure represented what might be described as ‘inter-paradigm’ borrowing (Hay 2010: 22).

Conclusions

This chapter has started off the process of presenting the UK energy policy paradigm as one which was, as of 2000, institutionalised and depoliticised in a ‘deliberative’, ‘technocratic’ and ‘marketised’ sense. As will become clear in the next chapter this is not to claim that the UK energy governance system had completely devolved authority to the market, but to say that the ideas that dominated the way in which the system was

structured and run were ‘pro-market’ ideas about competition, economic efficiency, privatisation and liberalisation. The system of governance in place largely reflected these ideas, and viewed other ideas as less credible. Regulation was still a not inconsiderable part of the UK PEPP but it was always hoped that with the passage of time it could be increasingly withdrawn. It can be claimed, therefore, that the UK PEPP could be found, on any continuum between a ‘state’ or ‘market’ system, closer to the market end than most other countries in the world.

Having established a starting point against which to measure paradigm change, as well as a system of measuring the degree of change, this chapter was then given over to understanding why and how change might come about. In particular it has focused on conceptions of paradigm shift that link together widespread perceptions of crisis with punctuations in the evolution of policymaking and those which underpin the importance of ‘crisis narratives’ to the process of change over time. Narratives are understood to have provided for a widespread perception that energy was in crisis, to have been responsible for providing evidence of policy failure and for offering up a range of alternative solutions. When applied to UK energy governance change in the 21st century these insights can assist in explaining why perceptions of energy crisis, explained as a security of supply crisis, came to inject a sense of urgency into UK political elites resulting in a repoliticisation and then a ‘re-think’ of energy.

Chapter 3:

The Pro-Market Energy Policy Paradigm (PEPP): Historical Context, Ideas and Institutionalisation

Introduction

In the last decade, the case for market economics has emerged, coherent and formidable, as a blueprint for prosperity and a guarantee of freedom.

(Department of the Environment, *This Common Inheritance*, 1990)

The above quotation from the seminal UK document on climate change, ‘This Common Inheritance’, is a clear reminder of the extent to which belief in the possibilities of market economics had penetrated the UK political establishment by 1990. This chapter, however, instead of taking the PEPP as ‘fait accompli’ will analyse the evolution of the PEPP by seeking out how and why this system came into being, as well as by starting to consider the degree to which it became institutionally embedded, and with what consequences.

The brief section on British energy policy between the Second World War and the early 1980s reflects an alternative perspective on energy, based in turn within a Keynesian model of governance. Energy companies were largely nationalised during this time period and the emphasis was on ensuring nationwide, industrial and domestic, access to electricity, on ensuring energy supply security, as well as on protecting the domestic coal industry. This period, from the mid 1940s to the late 1970s, was one within which the notion of actively maintaining energy provision and security was regularly on political agendas. This was particularly as Western domination over the primary source of energy, at that time oil, came to be challenged by huge finds in, and production increases from, the Middle East.

By the late 1970s, and early 1980s, neoliberally informed economists had come to decry what they perceived as high levels of managerial inefficiency and a lack of cost effectiveness in the energy sector, including oil, gas and electricity. This tied in well with other, increasingly dominant, ideas about economic governance and, in specific, the appropriate role of the state relative to that of the market in the provision of economic goods. A close inspection of pronouncements made by political figures key

to energy governance, such as Margaret Thatcher, Nigel Lawson and Stephen Littlechild, show an overt commitment to creating political conditions within which markets would become the primary providers of energy to UK businesses and households. Energy security from this perspective could and would be more possible through the domestic and international marketisation of energy and the introduction of competition and cost efficiency.

The following section of this chapter will consider the ways in which pro-market ideas were implemented, or in other words how they became part of everyday political practice in energy. The recently elected Conservative Administration embarked on a programme of energy sector privatisation and liberalisation. They set new goals for policy, created new policy instruments and, in 1992, disbanded the 'Energy Ministry' and with it the role of Secretary of State for Energy. The process of implementation can be better understood by considering the various types of depoliticisation, as put forward in chapter two, in particular 'marketised', 'technocratic' and 'deliberative'.

Although the argument here is that pro-market political practice came to be more deeply embedded within political norms and institutions over time this did not spell the complete demise of alternative ways of thinking about energy governance. It should by no means be assumed, either, that the processes of putting pro-market ideas into policy practice were straightforward. The social upheaval experienced by mining communities in the wake of attempts to withdraw state support for coal was a salutary warning of the difficulties inherent in attempting to remove energy from politics.

1. British Energy Politics Under Keynesianism

Energy, like many areas of polity, has been subject to various ideas about how, and indeed whether, it should be governed over time. In the 12th century, Edward I of England ruled that wood should be burnt for heating instead of coal, which had polluting properties. Much later, in 1819, Parliament convened a Select Committee on the subject of the environment (Ezra 1983: 199). The concerns have remained largely consistent over time, pollution and access to supplies, but political attitudes and priorities given to energy, and pollution, have changed.

What has been quite consistent over the past century or so, and across perspectives, however, is a sense that energy can, and does, play an important socio-economic role.

Early examples of this view are arguments put forward about the central role that new knowledge about how to produce energy played in both the Agricultural and Industrial Revolutions (Cipolla 1964; Hartshorn 1966; Bromley 1991; Hudson 1992; Wrigley 2010). More recently academic energy analysts, and key political commentators, from a wide range of theoretical perspectives, have emphasised the role of energy in modern society, politics and policy (Feis 1950; Cipolla 1964; Venn 1986; Yergin 1991; Strange 1988; Painter 2002; Helm 2003; Freese 2003; Stanislaw 2004; Baghat 2006; McGowan 2008; Klare 2008a; Giddens 2009; Wrigley 2010). Such observations, which highlight humankind's dependencies on energy, are well reflected in this quote from Heinberg:

If we were to add together the power of all the fuel-fed machines that we rely on to light and heat our homes, transport us, and otherwise keep us in the style to which we have become accustomed, and then compare that total with the amount of power that can be generated by the human body, we would find that each American has the equivalent of over 150 'energy slaves' working for us twenty-four hours a day.

(Heinberg 2003 in Giddens 2009: 36)

1.1 Domestic Energy Policy under Keynesianism

Energy, in the post-war era, was very much intertwined with overall ideas about economic governance practices, and as before, with ideas about the role of the state. The post-war era in Britain had born witness to a major socio-economic shift, which has been described, by new institutionalists, as a policy paradigm shift (Marsh 1999; Hay 2001; Blyth 2002; Oliver and Pemberton 2004). This was the emergence, under the Atlee Government, of the dominance in political practice of Keynesian ideas and concepts (Marsh 1999: 9). Also underpinning the way in which energy was governed over this period was a strong sense of energy's socio-economic role: as vital to much needed economic growth, as a public service and as linked to modernity.

In 1942 a new Ministry of Fuel and Power had been established, initially with the intention of ensuring adequate energy provision for military as well as commercial and domestic purposes.³³ During the war energy prices had been controlled and petrol was rationed, indeed since the conversion of the British navy from coal to oil, supplies of petrol was considered integral to the war effort (Strange 1988; Yergin 1991). Post WWII the Ministry of Fuel and Power was maintained, but energy policy's objectives

³³ The Ministry of Fuel and Power was renamed The Ministry of Power in 1957.

and design changed. A principal objective, therefore, of energy policy post war became to produce the energy required to provide social goods and to grow the economy, which had shrunk considerably over the course WWII. Energy, importantly, was seen as a pre-requisite for economic growth (Helm 2003: 2).³⁴

Energy, and specifically electricity provision, was also deemed important as a part of some of the wider aims of the Welfare State. It was understood that individuals should have access to certain social or ‘merit goods’ such as “...food, clothing, heating, health and shelter...” (Helm et al 1989: 56-57). Although electricity was understood to be a direct input into the minimum requirement of heating, it was also an input into the provision of food, clothing, health and shelter. As such, energy was understood to provide social as well as distributional roles in society (Helm 2003: 15; cf. McGowan 2008). Energy policy planners were, in addition, concerned with ensuring an ‘optimal’ supply mix to meet estimated future demand. Energy efficiency was not, during the 1950s and 1960s on the policy agenda, although technological change and high investment had led to steady improvements in energy utilization (Cheshire 1986: 396)

Indeed it had been considered that energy was of such vital national importance that, in line with wider Keynesian principles, markets were hopelessly inadequate in providing appropriate energy supplies. Energy companies were largely nationalised and some industries, especially coal, were protected (Hartshorn 1966: 1). Over time, in the energy sector, “...state owned companies were deemed to be so natural that they were made *statutory* monopolies” (Helm 2003: 1). There had emerged a national energy policy which was designed to map out demands and supplies, and to ensure that they were balanced within a planned, monopoly system, the coal industry was supported by the state, and energy prices were controlled (Helm 2003: 14). A new system of electricity supply was over time established, following work that had started in the 1920s, requiring enormous state expenditure in a National Grid, large regional power stations and extensive transmission systems.³⁵

³⁴ The ‘rule of thumb’ was that GDP growth of three percent would require growth in electricity demand of around seven percent (Helm 2005: 3). The recognition of overt relationships between economic growth and the need for ample supplies, at affordable prices, has in large part been an influencing factor on Chinese economic and foreign policy during the 2000s.

³⁵ The Central Electricity Board (CEB) was initially set up under The Electricity (Supply) Act of 1929 in order to standardise the nation’s electricity supply.

By 1969, however, with the physical infrastructure to support national demand and with political consensus about energy and how it should be governed largely in place, the Ministry of Power was merged with the Ministry of Technology – which was subsequently, in 1970, merged with the Board of Trade to form the Department for Trade and Industry (DTI). Unlike the later dissolution of the Department of Energy (DoE) in 1992 this change reflected a continued faith in the role of the state – particularly given the established structure of state run energy enterprises, infrastructure and area and general boards. However, it does display a similarity in political thinking with the later dissolution in that both reflected the degree to which political consensus had emerged about how energy should be governed. Once each system had been established it appeared that political desire for a separate Ministry, or Department, with all the associated costs incurred, diminished. The 1969 decision had also co-incided, see below, with a couple of decades of stable oil prices.

1.2 Energy, International Relations and Foreign Policy

British foreign energy policy has been, at best, controversial over the course of the last century or so. Keynesian politics may have come to dominate domestic energy policy, but geopolitics arguably continued to dominate international relations in energy over much of the 20th century. During Victorian times and the early 1900s Britain was a net exporter of coal. Some have suggested that large indigenous supplies of the world's, at that time, primary energy source played a material part in Britain's ability to maintain a hegemonic role, or 'great power status' (Katzenstein 1978; Bromley 1991; Painter 2002).

As oil came to replace coal, however, British foreign policy came to reflect the need to access oil and on acceptable economic and political terms. Britain moved from its longstanding position as a net exporter of energy to a being a large net importer of oil (Hartshorn 1966: 7). This material change was replicated in the mid 2000s when the UK moved from an, albeit shorter period, of net exports of oil and gas to a net importer of hydrocarbons. Britain's switch to oil and its lack of indigenous supply was understood as having major foreign policy implications. Churchill had famously suggested that "... (t)o commit the Navy irrevocably to oil was indeed 'to take arms against a sea of troubles'..." (Churchill in Yergin 1991: 12). There were widespread fears about reliance on distant and insecure oil supplies, but oil was considered, by

many including Churchill, so technologically superior to coal that the decision was made to switch the British Navy to run on oil.

As new finds of oil were increasingly being made outside the US, in the Middle East in particular, it was assumed that access to supplies at ‘reasonable’ prices would be enabled through British control of oil companies, particularly the Anglo-Iranian Oil Company (Keohane 1984: 164).³⁶ And through extensive diplomatic relations, particularly with the US, oil diplomacy became a central theme of foreign policy (Venn 1986; Keohane 1984). Britain maintained its foreign policy of supporting access to reserves on terms favourable to the ‘Seven Sisters’, which included British Petroleum and Shell.³⁷ Access to oil from ‘Persia’ was maintained through a range of different, but inter-related, structures, partly corporate, partly ‘imperial’ and partly military (Tretault 2009: 376-7). When ‘oil diplomacy’ failed military means were sometimes adopted. An oft cited example is US and British support for the overthrow of Iran’s Mossadeq Administration, which had nationalised the Anglo-Iranian Oil Company in 1951. In retrospect, the extent to which Britain was prepared to protect access militarily became clear (Painter 2002), although at the time the decision to become involved in Iran was taken under conditions of ‘secretised’ depoliticisation.

Not long after the overthrow of Iran’s Mossadeq, another international event, the ‘Suez Crisis’ was more widely perceived as threatening to British energy supply security. It has been argued that as a result of this crisis the British Government made a specific decision to treble in size the already planned nuclear power programme (Helm 2003: 34). This, in turn, implies an increasing awareness of the risks of depending on too few sources of energy, the emergence of new, non-carbon based technologies, as well as of links between perceptions of crisis, in the form of supply insecurity, and policy change. Nuclear electricity, in that it can be produced domestically, has in addition often been the response of UK government’s to perceptions of supply insecurity.

³⁶ In 1939 British companies still accounted for around half of oil production outside the US and the USSR (Painter 1993).

³⁷ The ‘Seven Sisters’ are the oil companies which dominated international trade in oil for a substantial part of the 20th century. They included five American and two British companies. Although the American companies were privately owned and managed, they received considerable quantities of state support over time in terms of tax breaks, diplomatic support, and, where deemed necessary, military support in order to maintain access to oil at acceptable prices (Yergin 2001; Painter 2002).

The period following on from the early 1950s was one in which there was a low and stable world oil price, growing international oil trade, and a "...greater ability of oil companies to control both the supply and price of oil..." (Cheshire 1986: 395). This was accompanied by very little concern in Britain, as was the case in the 1990s, about long-term global energy availability. It is also worth noting briefly, however, that although the 1950s and 1960s also marked the start of a substantial increase in international agreements and organisations, many of which covered trade, energy remained remarkably free of international agreement (Keohane 1984; McGowan 2008). The European Union, which started life as the European Coal and Steel Community in 1951, did not actually manage to come to agreement on energy (McGowan 2008; Natorski and Surrallez 2008). When the internal market of the EU was launched in 1992, the energy sector was left out, although attempts have recently, in 2007, been reinstated to launch an 'Energy Policy for Europe' (McGowan 2008: 93; EC 2011: editorial).

1.3 1970s 'Oil Shocks': Energy and Crisis

In the last three decades we have become so increasingly dependent on imported energy that today our economy and well-being are hostage to decisions made by nations thousands of miles away... The energy crisis has placed at risk all of this nation's objectives in the world.

(Kissinger in Strange 1988: 204)

The two 'oil shocks' of 1973 and 1979 swiftly reversed energy policy trends. The shocks, once more, prompted broad and extensive public debate about energy in Britain and the West. There was a renewed emphasis on international threats to security of supply, defined as reliable supplies at affordable prices, this time from OPEC. Over the course of the 1970s complacency gave way to acute concern that total global energy consumption had, over the previous decades, been doubling every 15 years (Cheshire 1986: 396). The depth and breadth of public concern were unsurprising given OPEC's decisions, consumption growth, the sudden quadrupling of oil prices in 1973 and various economic and social knock-on effects across Britain (Hay 1999; Helm 2003; cf. David Steel in Ezra 1983: 196). One of the most clear cut political responses internationally was the formation of the International Energy Agency (IEA) to attempt to co-ordinate consumer nations' energy strategies, to improve communication and

technology sharing (Leaver 2005: 92; cf. Friedrichs 2010: 3).³⁸ The IEA recommended that member countries seek to become more energy efficient, improve excess storage facilities and look to diversify access both geographically and in terms of energy source (Yergin 2006).

The oil shocks also prompted a much wider review of energy policy in Britain (Chesshire 1986: 396). In 1974, in the immediate aftermath of the first crisis, it was decided that Britain needed a Department of Energy (DoE) once more, only five years after the Ministry of Power had been merged into the Ministry of Technology. Again, we can draw parallels between renewed fears about energy supply security mounting in the mid 2000s and the formation of Department for Energy and Climate Change (DECC) in 2008. Although in the period between oil shocks energy policy did not undergo a profound structural shift, aside from the re-instatement of the DoE, a wide number of changes were made. The price shocks were interpreted as another reminder of the dangers associated with a lack of diversity in energy supply and as such, the nuclear and coal industries, as domestically based, received another boost in Britain, as well as in France, the United States and Germany (Chesshire 1986: 396). In an associated political reaction the first, albeit small, state support programme for ‘renewable’ energy was also established (van der Horst 2005: 705).

Oil and gas had, however, been discovered in the late 1960s in the UK Continental Shelf (UKCS) region of the North Sea and production from these sites started in the 1970s. In a move again not dissimilar to initial reactions to perceptions of energy insecurity in the 2000s, Britain also responded to the 1973 oil crisis by decreeing a boost in output from the UKCS with the intention of becoming ‘self sufficient’ by the end of the decade (Katzenstein 1978: 296). So although diversity in terms of source and geographic location of energy was being overtly encouraged, and at this stage also by the IEA, there ran alongside a tendency to concentrate on energy independence and on *domestic* production as an antidote to international insecurities. By the 1980s oil and gas were to become a serious boost to the coffers of the UK Treasury (Kemp and Stephen 2007: 183).

³⁸ Other energy organisations were set up in response to the 1973 oil shock, such as the ASEAN Council on Petroleum (ASCOPE) (Karki et al 2005: 499).

The Department of Energy produced a ‘consultative document’ on energy policy in 1978, in the immediate aftermath of the second ‘oil shock’ (DoE 1978). This document was primarily concerned with questions of energy security and it took the view that “...energy policy is necessarily concerned with a long time horizon...” and with the wider world energy scene (Rutledge 2007: 902). Concerns were expressed about longer-term availability of oil

... there is wide agreement that world oil supplies cannot continue to increase for much more than a decade or so and will thereafter become increasingly scarce and expensive (DoE 1978: 1)

Diversity of supply source, therefore, also remained a priority and energy policy would be required to deliver on this. The objectives of energy policy were focused, unsurprisingly, on the provision of adequate and secure supplies of energy but with an eye to the least social cost, and the efficient allocation of resources. It was understood that energy policy could intervene to change the pattern of energy use in order to ensure development of energy sources in accordance with the national interest (DoE 1978 in Webb 1985: 28).

2. The Evolution of the PEPP: Ideas about Energy and Governance

In the first chapter of this thesis a brief introduction was given to the pro-market perspective on energy. Chapter two built on the ideas outlined in chapter one to construct a picture of the UK pro-market energy policy paradigm (PEPP) which was characterised as containing five separate levels. Each level outlined was in turn, but perhaps in different ways, influenced by ideas about energy, its politico-economic role, and pro-market ideas about how it should be governed. This section will start to explore in some detail how such ideas came, first of all, to be important in energy policymaking processes.

This section is, in conceptual terms, particularly informed by arguments outlined in chapter two about the active relationships between ideas and political practice expressed by various new institutionalists (Hall 1993; Berman 1998; Greenaway 1998; Hay and Wincott 1999; Greener 2001; Hay 2002; Blyth 2002; Oliver and Pemberton 2004; Schmidt 2006; cf. Kern 2009). As this section progresses on to section three clear links will emerge between political narratives and ideas about energy, stated objectives relating to these ideas and how energy then came to be governed.

2.1 The Path of ‘Radical Reaction’

It is possible to piece together quite a thorough picture of Conservative ideas at this time, which were sometimes described as ‘revolutionary’ and as acting as a clear break with past political behaviour. Such evocative claims of ‘revolution’ may have been somewhat overstated given the tendency for different ideas about energy, and broader governance, to dominate policymaking processes and systems at different points in time. Prior to the era of Keynesian economic governance ideas about the need to limit the role of the state in economic governance had dominated for a considerable period of time (Ruggie 1982: 386; cf. Lawson 1980; Helm 2003). It has been argued that liberal economic ideas had reached a position of such dominance over the course of the *Pax Britannica* that they came to restrict “...the legitimate social purposes in pursuit of which state power was expected to be employed...” to that of safeguarding the self-regulating market (Ruggie 1982: 386). As will be seen below, similar ideas about the appropriate role of the state came to dominate again – although this time, in energy, perhaps for a much shorter period of time.

2.1.1 Political Protagonists

Towards the end of chapter two some important questions were raised about the role of various actors, or groups of actors, in processes of profound governance change. Very brief conclusions were made about the role of ‘top down’ change via political elites, but also about the crucial role that publics have played in allowing for conditions conducive to profound change. This brief sub-section looks back at the late 1970s/early 1980s and tries to identify key protagonists for change during this period. This is done in order to start making connections between ideas and political actions and outcomes, as well as to give some guidance in terms of the role of key actors and groups in energy governance and policy change in the 2000s.

Dieter Helm, in his particularly thorough history of UK energy policy from 1979 to 2003, claims that energy was given a “...clear ideological and political steer...” both under Margaret Thatcher and Nigel Lawson, who became Secretary of State for Energy in 1983 (Helm 2003: 2). This implies a very ‘top down’ process of political change in the energy sphere. Considering the same period, Andrew Graham observed that the Prime Minister was, due to a variety of reasons, in a strong position and so could enact change (Graham 1997: 117). Assuming, however, that Prime Minister Thatcher did not

single-handedly manage to reach back in time and re-invent classical liberal economic ideas, it might be worth considering, at this point, a wider range of actors.

Thatcher and Lawson's ideas about energy and its governance, referenced in more detail below, had already been most clearly elucidated in academic work of the late 1970s/early 1980s in the UK. This body of work, written by leading economists who later crossed over from academia into political and departmental positions, and vocalised for popular purposes by Conservative MPs such as Enoch Powell, specifically recommended energy governance change based on neoliberal economic ideas (Forman 1977; Robinson 1981; Robinson and Marshall 1981; Eden et al 1981; Littlechild 1981; Littlechild and Vaidya 1982; Lawson 1989). This work recommending change to energy governance was itself embedded within a wider field influenced by the ideas of Friedman and Hayek on neoliberal economic governance and public choice analysis (Littlechild 1981: 11-14; Helm 2003: 414; cf. Lee 2007; Interview 16). Keith Joseph, the 'entrepreneur of ideas' or 'Minister of Thought', and the 'Institute of Economic Affairs' have been referred to as primary interlocutors between neoliberal academic ideas and Conservative political practice (Yergin and Stanislaw 1998: 95).

We have already briefly considered, above, intellectuals, academics and policymakers as having been influential over energy policy change. However, it might be worth extending the range of possibly influential actors even wider to consider other advocacy groups, professionals and practitioners directly engaged with the issue, such as Energy Ministry staff (Wilson 2000: 258). Hay and Marsh have observed that the Conservatives' overall commitment to the market owed a great deal to "...the gathering influence of such ideas in the Treasury and the Bank of England from the mid-1960s onwards..." (Hay and Marsh 1999: 213). This suggests a role for other important Departments of Government in facilitating change. Lastly, again, public acceptance of change based on these ideas was also important, as observed by Andrew Graham, when he suggested that neoliberal ideas

...have had a long history... they had a special resonance in the UK, where many of them originated or acquired special prominence... (Graham 1997: 119; see also Lawson 1980: 10)

All of this in turn both warns against considering any set of ideas within a social or historical vacuum and against ascribing political change to one set of actors alone. In

chapters five and six of this thesis attention will be paid to the roles of a range of social groups within the process of change. This is partly to address concerns about policy paradigm theory and a lack of detail with regard to *how* change takes place and, indeed related, partly to ascertain how various influences can come together in the process of change (cf. Widmaier et al 2007; Schmidt 2009; Chwierothe 2010).

2.1.2 *'What has Gone Wrong' and 'What is to be Done'*

In chapter two, when considering the role of crises and shock in profound governance change it was suggested that first of all a problem needed to be identified, then narrated, usually by principal political protagonists, and then solutions needed to be offered (Hay 1996 and 1999; Wilson 2000; Blyth 2002). This section will suggest that energy governance change was, under the Conservatives, part of a wider programme of change in response to an extended period of perceived economic and social crisis in the UK during the 1970s.

The oil shocks, however, may well have had an impact on *public* perceptions of that crisis. This suggestion takes us back to the notion raised in section four of chapter two that publics, and the media as interlocutor and intermediary, are also important in the process of political change (Hay 1996: 261; Hall 1996: 286; Buzan et al 1998; Widmaier et al 2007: 755). Without widespread conviction that there is a crisis, which needs to be addressed, it would be much more difficult to implement profound governance change with all its implied social and economic upheaval. Colin Hay has suggested that the 'oil shock' of 1973 served as a catalyst for the longest and deepest economic crisis since the Great Depression (Hay 1999b: 103; cf. Chwierothe 2010). Others have suggested that energy crises, in the form of escalating oil prices, have been at least partly responsible for economic recessions over time (Steel in Ezra 1983: 196; Stevens 2007: 142; cf. Hamilton 1983; Chwierothe 2010).

'Keynesianism' was furthermore portrayed by 'New Conservatives' as having neither explanation nor solution to the economic crisis (Hay 1999b: 103; cf. Lawson 1980). The Conservatives came to power partly on the back of its convincing narrative about how to address the widely perceived economic and social crisis in the UK, dubbed the 'Winter of Discontent' (Hay 1996 and 1999b). This alternative narrative constructed the crisis as a failure of Keynesianism to which they could present the solution being a withdrawal of the state, particularly from economic governance (Lawson 1980: 2-3).

Faith in “...efficacy of government action...” was labelled a “delusion” (Lawson 1980: 2). Lawson, like Graham above, has suggested that “...scepticism with state power and state intervention...” is closely related with “...the instinctive beliefs of the British people in general, and of the working classes in particular...” (Lawson 1980: 10; cf. Graham 1997). Once the crisis had been, intentionally, constructed as one of an overextended, overloaded and ungovernable state the solution, for the state to do less, followed naturally (Hay 1999: 100). In later work, on de-politicisation under the Conservatives, Hay further refers to this period of narrating, or overtly stating, how the UK economy should be governed as “normative neoliberalism” (Hay 2007: 98).

2.2 Ideas about Energy and its Governance

As has already been suggested, various analyses on UK energy paradigms in the 1990s and 2000s argue that the way in which energy had come to be governed was subject almost exclusively to the emergence of broader macroeconomic governance ideas (Helm 2003; Rutledge 2007; Mitchell 2008; see also Rodriguez 1987). This section will however also consider ideas about energy and its role in society as being important to governance practices and to change. It will ask how it was that energy, formally treated as an important social need, akin to a public or merit good, became viewed as just another sector of the economy. It will also consider those ideas, specific to energy governance, that became so influential on the design, implementation and maintenance of the UK PEPP.

2.2.1 Ideas about Energy

In order to resolve questions of how to govern energy the Conservatives needed to formulate their own understandings of the function that energy plays in the UK political economy. One of the core ideas underpinning the Conservative approach to energy emerged such that it could, and should, be treated as “just another commodity” or traded good which is ultimately replaceable, or fungible (Lawson 1989: 23; cf. DoE 1982; Littlechild and Vaidya 1982; Helm 2003; Blackhurst 2004; Umbach 2010). Energy, it followed, should be treated in political terms like any other sector of the economy (Lawson 1989: 23), but not subject to state provision like other services, still viewed as ‘minimal basic services’ or public goods, such as defence and health care (Helm 1986: 1).

Although energy was denationalised, as were other ‘economic’ sectors during the 1980s, it could be argued that the changes represented a more radical departure for the energy sector. By assigning it to the category of ‘just another commodity’ energy, which had formed the basis of the UK’s ability to modernise in an industrial and economic sense, had been stripped of much of its wider national and social meanings. This is not to say that energy was considered unimportant but that initially it was stripped of its role as ‘merit good’, and over time, energy supplies lost, again, their role as important to national security and economics. Again, the wider ideational context was still important. Anatole Kaletsky has suggested that the growing intellectual dominance of market fundamentalism encouraged serious economists to assume that social values and market prices were one and the same thing (Kaletsky 2010: 326-7).

Such links between how energy was conceptualised, particularly in terms of socio-economic role, and how it was governed hint at change in energy governance as being more than just part of a wider paradigm shift in economic management. It was important to the governance of energy that it became understood as just another sector of the economy as it became, as such, an industry which had “...no place in the public sector...” (John Moore, MP, in Webb 1985: 28). Energy’s re-characterisation also facilitated the idea that it was not a ‘political’ but ‘economic’ subject and not open to government intervention (Williams 2003: 515; cf. Helm 2003: 386; Interviews 2 and 15). What is also of note is the extent to which it became a ‘technical’ subject which would be better understood, and dealt with, by ‘technical’ experts, preferably economists (cf. Hall 1993: 291; Burnham in Hay 2007: 92).

The context within which ideas about energy, and its socio-economic role, changed was also quite specific. There are some important factors which underpinned this view and prevented it from becoming challenged in a credible way within the UK over the 1980s and 1990s. Firstly, post-war administrations, as already mentioned, had spent considerable funds on building up a significant electricity supply system for Great Britain (Helm 2008). Likewise in the oil and gas sector initial, heavy investments, which had already been made in North Sea exploration, production and transit, had been boosted and facilitated by ‘state sponsorship’ (Helm 2003: 62).³⁹ Once in place,

³⁹ Particularly important to the establishment and future success of the North Sea venture were the investments made in infrastructure to enable supplies to reach UK consumers. A new pipeline system

however, these systems could be taken for granted – the bulk of investment requirements having already been met in this sector of heavy initial investment requirements and long-term returns.

Secondly, large-scale production of oil and gas from the North Sea, which had emerged as significant over the 1980s, meant that questions of supply, and its security, could over time become less directly significant. From the late 1970s onwards supply from the North Sea rose steadily, such that by the early 1990s the UK had become an exporter of both oil and gas. In addition tax revenues from oil and gas became an important revenue stream for the Treasury. For example “...(o)il revenues rose sixfold over the period 1979/80 to 1984/85 to some £12 billion, or nearly one-tenth of the Chancellor’s budget” (Keegan 1985: 17) and these were used to prop up public finances (Helm 2003: 1; Kemp and Stephen 2007). Also important in terms of keeping questions of energy supply security at bay was the reduction in domestic demand, which in turn was a result of the sharp contraction in the manufacturing sector, steel, coal, aluminium, chemicals, cement and car industries (Helm 2005a: 4).⁴⁰ The 1979 oil shock, the 1980-1982 recession, and rising exchange rates were understood to have impacted heavily on the manufacturing sector (Helm 2007a: 3).

2.2.2 Ideas about Energy Governance:

The PEPP emerged, therefore, amidst changing ideas about energy’s function in society, facilitated by growing indigenous supply, but it was part of the New Conservative’s “conscious change of direction” (Lawson 1980: 1). In the late 1970s and early 1980s, also in the wake of two energy crises, a number of economists became increasingly adamant that energy needed to be freed from government planning and interference in order to improve economic efficiency, to lower end costs to consumers and to improve security (Forman 1977; Robinson 1981; Eden et al 1981; Littlechild 1981; Littlechild and Vaidya 1982). This group of economists, mentioned already in section 2.1.1 above, were responsible for outlining the practical energy policy implications of a range of economic ideas promulgated by well-known academics such as Milton Friedman and Friedrich Hayek (Helm 2003: 59; cf. Mitchell 2008: 28).

was installed and domestic appliances and commercial boilers needed to be replaced. The public sector could carry the risk on the back of the monopoly and guarantee of the Treasury (Helm 2003: 110).

⁴⁰ The manufacturing industry was using 25% less energy in 1982 versus 1970 (Lehman and Hough 1983: 267).

Economic efficiency and competition, or lack of either, were increasingly held to be of the utmost importance when considering the historical performance of the energy sector. Competition was, wherever possible, to be encouraged in that the key was understood to lie in increasing the responsiveness of these, read energy, industries to the forces of the market place (Lawson 1989). This was also particularly within a wider context of ideas about the need to reduce the overall size of ‘the state’ financially as well as politically. Conservative thinkers and politicians were intent on monetarism, and in particular on reducing the public sector borrowing requirement (PSBR) (Webb 1985: 27).

This line of thinking followed that if energy can be classified as a commodity, always replaceable, then there would be no more need for national management strategies, otherwise known as national energy policy. Such strategies were perceived to cost more than they were worth, to be inefficient in allocating goods and to be run by government, who according to new thinking, did not have the capacity to do so (Littlechild and Vaidya 1982). Stephen Littlechild referred in his work to ‘public choice’ theory when casting doubt on the adequacy of political rules for achieving “efficient allocation of resources” and on the merit of running industries in order to achieve political ends such as the redistribution of income and power (Littlechild 1981: 11-12). It was concluded that a, what some might term artificial, separation be made in active governance terms between energy, as an economic sector, and politics, as previously represented by state interventionism (Bromley 1991: 49).

Unsurprisingly much academic work from this perspective focused on the need to marketise energy in the UK by assuring that energy was supplied to end consumers via freely trading, competitive markets - stripping it away from government planning, interference, price control and specifically national management strategies (Robinson 1981; Eden et al 1981; Lawson 1989). This would allow, it followed, for greater economic and managerial efficiencies and, through increased competition, for less monopolistic practice in energy supply (Webb 1985; Lawson 1989; Blackhurst 2004). Competitive markets would, it followed, be much more efficient at setting prices thereby sending the correct signal to producers about what to produce, when and in which area providing a further boost to energy security (Bohi and Towman 1996). Competition would furthermore improve the procurement of energy (Mitchell 2002: 6),

and benefit consumers by bringing down end costs whilst also partially redressing the power imbalance in the consumer-producer relationship (Yergin 1991: 781).

Other economists pointed to a further role that markets can play in improving energy trade:

(t)here is a fundamental difference between 'policies' pursued by companies, and government 'policies'. The former are subject to on-going checks of reality against the market: if the policies are wrong then companies lose money, and they fairly rapidly change their policies or go out of business. (Henney 1994: 11)

Many believed that the internationalisation of freely trading energy markets would help to reduce the potential for 'statist' exporters to interfere in the trade of these commodities. Such interference was perceived to have been responsible for various negative effects on pricing, production, trade and consumer economies over time (Mitchell et al 2001; cf. Youngs 2009). The institutionalisation of these ideas within international governmental organisations would, theoretically, be the "icing on the cake" of the establishment in practice of neoliberal economic ideas about energy governance (cf. Youngs 2009). The existence of energy security became, over time, synonymous with the internationalisation of competitive, freely trading energy markets in that they would provide for less possibility of supply disruption and leave importers less vulnerable (Yergin 2007).

It has been further observed that, from the 1980s onwards, the wider ideational climate increasingly became one wherein economic growth, the pursuit of profit, short-term enhancement of share prices, and other cultural values began to grow in importance against other social values (Friedrichs 2004). Private finance and financial engineering became a widespread part of the overall culture of marketisation and energy proved, as is discussed below, no exception to this.

3. The Making of the PEPP: Ideas and Political Practice

This section will argue that processes of depoliticisation can be applied in order to understand the ways in which the range of ideas outlined above, about energy and governance, became embedded within political and market institutions. There is an emphasis in this section on processes of 'marketised' depoliticisation used, as suggested in chapter two, to mean the passing of responsibility from formal state institutions to the

market for energy supplies. Depoliticisation, in its ‘technocratic’ sense, has also affected this issue area by actively ‘demoting’ it from being subject to formal political scrutiny, deliberation and accountability, to, ultimately in the case of energy, a position akin to political silence (Hay 2007: 82).

3.1 ‘Normative Neoliberalism’ and Energy

If we return to Helm’s history of British energy policy he notes that:

(c)ompetition and liberalization would, its architects hoped, take energy out of the political arena... Labour shared this vision and hoped that energy would drop off the political agenda. (Helm 2003: 386)

The early years of the Conservative Energy Ministry, despite strong academic blueprints having been presented for the direction of reform to energy, got off to a slow start. This is partly because in 1979 many were more concerned, again, about immediate energy security risks in the wake of the second oil shock. The first had had knock-on effects of energy shortages, petrol queues and gas supply interruptions and these were feared again the second time around (Helm 2003: 45; cf. Steel in Ezra 1983: 196; Hay 1999b: 103). This was also because Prime Minister Thatcher did not, initially, have widespread support for energy reforms (Helm 2003: 44). Energy remained, as such, very much *on* the active political agenda right up to the mid 1980s and the normative ideas of the Conservatives on reform needed to be stated and pursued (cf. Hay 2007: 97).⁴¹

As with UK energy governance change in the mid to late 2000s, much resistance to change could be located within those government, or in the case of the 2000s quasi-state, institutions responsible. Hall’s arguments about policy paradigms and ‘institutionalised subjects’ help us to understand how previously dominant ideas and assumptions can take time to disappear (Hall 1993). Helm has noted that policymakers in the very early 1980s continued, between 1979 and 1981, to operate under old assumptions about energy, and the provision of security, despite other efforts to reclassify energy and redesign governance (Helm 2003: 54). In 1980 and 1981 early steps were taken to prepare the energy sector for privatisation and liberalisation, such as

⁴¹ This period of normative neoliberalism where ideas needed to be overtly stated, and to an extent deliberated, contrasts heavily with energy under the later period of ‘normalised neoliberalism’ wherein political debate of a critical nature had all but ceased (cf. Hay 2007: 98).

the 1980 Competition Act and the 1981 Oil and Gas Enterprise Act, but it was not until the Energy Act of 1983 that the process was more clearly and forcefully initiated.

One of Prime Minister Thatcher's mandates with regard to energy governance had been to make sure that those with important posts at the Energy Ministry were "one of us" and in the September 1981 Cabinet shuffle Nigel Lawson became Secretary of State for Energy. This is where we return again to the economists, Stephen Littlechild, Eileen Marshall and Michael Beesley, who had largely been responsible for producing the blueprint of ideas about how to govern energy (Helm 2003: 59; cf. Forman 1977; Littlechild 1981; Littlechild and Vaidya 1982; Beesley 1981; Robinson et al 1981). They were to receive executive and advisory positions within the DoE and the regulator, indeed some of these principal figures, such as Marshall and Littlechild, were to hold office for most of the 1990s, and into the early 2000s (Helm 2003: 60). This implies that Thatcher understood that existing public servants would need a 'push' in order to change. As such in order to pursue profound governance change, or 'revolution' in New Conservative terminology, those that supported the new blueprint would need to be placed in relevant positions of influence.

Both Lawson's 1980 treatise 'The New Conservatism' and his early, much cited, speech as Secretary of State for Energy in 1982 serve as reminders of why Thatcher had placed so much faith in his willingness to 'radically reform' energy (Lawson 1980 and 1989). So great was Lawson's influence in creating a new energy governance system that it came to be referred to retrospectively as the "Lawsonian paradigm" (Rutledge 2007). His works, in addition, serve to elucidate the relationship between this certain set of political ideas, the strong desire to put them into political practice and specific ideas about how this could and should be achieved. It seems that, in line with Hay's thinking on political decisions to depoliticise, Lawson and his new team genuinely believed that the energy sector would work better if subject to processes of privatisation and liberalisation (Lawson 1980 and 1989; cf. Miliband 2008).

3.2 Restating the Goal(s) of Energy Policy

This is where we again take up Peter Hall's notion that policy paradigms, and the core set of ideas that delineate them, are influential over objectives of policy, one of the five levels of the PEPP. If the idea to be pursued, politically and actively, was the reduction

of state interference in the energy sector then an obvious place to start would be by restating the goals of energy policy.

The new, overarching, objective of energy policy, the creation of an economically efficient, un-distorted market for energy, was clearly laid out by Nigel Lawson in his 1982 speech:

(f)or the United Kingdom... the pre-eminent objective must be to ensure that the vitally important energy sector functions as efficiently and effectively as possible within the context of economic policy as a whole... Our task... is to set a framework which will ensure that the market operates in the energy sector with a minimum of distortion and that energy is produced and consumed efficiently (Lawson 1989: 23).

Previously, the objectives of energy policy had been focused on the provision of adequate and secure supplies of energy but with an eye to the least social cost, and to the efficient allocation of resources. It had been understood that energy policy could and should intervene to ensure the development of energy sources in accordance with the national interest (DoE 1978 in Webb 1985: 28). The objective of secure energy supply did not disappear but was in effect demoted - all efforts were put behind the creation of competitive, efficient markets which were seen as the only objectives of policy that had come to matter (Mr John Moore, MP, in Webb 1985: 27; Helm 2004: 273; Rutledge 2007: 903). Besides, the thinking went that security of supply would, see above, be a natural outcome of the processes of marketisation (Mitchell 2002), and with sharply increasing production from North Sea Oil and Gas this theory would not be tested for some time to come (Helm 2003). The 'social' qualifications to energy objectives were also somewhat lost as was the goal of developing energy sources in the 'national interest'. The closest overt recognition of social aspects of energy policy was the assumption that growing competition in the sector would allow for prices to fall thus facilitating energy affordability and protecting consumers (Littlechild 1981: 13; cf. Yergin 1991).

By the time of the 1986 Gas and the 1989 Electricity Act the Secretary of State was charged with only three rather vague and flexible over-riding duties relating to security of supply, financial competence of energy companies and the promotion of competition (HMG 1986 and 1989). As such, in terms of hierarchy of objectives, they now seemed to run from creating a competitive market for energy and economic efficiency at the top

tier, to a second tier including security and affordability. Assumptions were already being made that if the first tier of objectives were to be reached, then the second tier would fall automatically into place.

Aligned to changing objectives, it had also strongly been suggested that there would, in future, be no more place for a national energy policy that, in part, sought to "... plan the future shape of energy production and consumption" (Lawson 1989: 23). The subsequent abandonment of national energy policy, which had first been proposed by Enoch Powell at the 1976 National Energy Conference (Littlechild and Vaidya 1982: 15), was deeply contested at the time as can be seen in more detail in section four below (Webb 1985: 28). It did, however, follow well the line of thinking, referenced above, which suggested that it would be inefficient for states to pursue such goals given their limited capacities.

Core energy policies were specifically abandoned, including the calculation of resource costs and the coordination of investment decisions by the DoE, as well as its central planner role in price setting (Helm 2003: 58). Within the context of the Conservative plan to reduce the public sector borrowing requirement the energy sector now faced specific financial targets. These targets had been proposed in 1978, "...to act as proper discipline on the industries' financial management...", but were first implemented in 1980 (DoE 1978; cf. Rodriguez 1987: 464). Once privatised, however, it was assumed that state-set financial targets would no longer be required to discipline energy companies' economic performance.

3.3 Instruments of Energy Policy

In addition to alterations in the objectives of energy policy the instruments of energy policy were also altered. It was agreed that the ultimate 'job of government' should be limited to setting the framework within which the scope of market forces, and competition, could be maximised (Lawson 1989: 23). This framework became one of the principal instruments of energy policy, but certain conditions first needed to be put into place in order for it to be created.

The 1980s, like the 2000s, are remarkable for the number of Acts related to the energy sector which were passed but, as already suggested, the implementation of a new paradigm takes much political activity (HMG 1982; 1983; 1986; 1989). The 'Oil and

Gas (Enterprise) Act' of 1982 and the 1983 Energy Act represented the first major attempts to deregulate energy, particularly the electricity sector (HMG 1982 and 1983). The 'Oil and Gas' Act initiated a process of separating out Britoil and Enterprise Oil ready for privatisation as well as that of opening up the gas networks to competition. The aim of the Energy Act, in 1983, was to facilitate competition in generation, transmission and supply by abolishing monopolies, requiring the 'Area Boards' to purchase electricity from private producers, and causing the industry to allow private companies to make use of transmission and distribution systems (Helm 2003; Thomas 2006). Post the Act, despite its clear intentions to boost competition (cf. Littlechild 1981: 13), the sector remained dominated by the monopolies and new entrants were seen as 'Davids' to the established 'Goliaths' (Helm 2003: 64; see also Thomas 2006).

Alongside processes to deregulate and reshape the sector to allow for competition, an extensive and extended series of privatisations were undertaken. The process of privatisation took place over the course of the 1980s and 1990s – starting with Britoil in 1982 and ending with British Energy, the nuclear company, in 1996.⁴² For some companies the turnaround between being nationalised and privatised was just a matter of years, for example, the British National Oil Company (later referred to as Britoil) had been nationalised only in 1977 and then privatised in 1982 (Helm 2003: 18). By the late 1990s, however, all major national companies had been broken up and sold off across all sectors of the energy industry including electricity, coal, gas, oil and nuclear – see table 1. This had been not only a lengthy but also a difficult process, particularly in the gas and nuclear electricity sectors (Helm 2003).

⁴² The nuclear sector had proven much harder to privatise given the age of the infrastructure and very high costs associated with replacing aging stock (Thomas 2006: 590; cf. Mitchell 2000).

Table 2: UK Energy Sector Nationalisation and Privatisation Schedule 1947-96

Sector	Nationalised	Privatised
<i>Coal</i>	National Coal Board (1947)	RJB Mining (1995)
<i>Electricity</i>	Central Electricity Authority (1948)	National Power, PowerGen (1990)
	Central Electricity Generating Board, Area Boards, Electricity Council (1957)	National Grid Company (1990)
		Regional electricity companies (1990) Scottish Power and Hydro (1991)
<i>Gas</i>	Area Boards, Gas Council (1948), British Gas Corporation (1972)	British Gas (Gas Act 1986)
<i>Oil</i>	BP (partial), British National Oil (1977)	BP (final) (1987), Britoil (1982), Enterprise Oil (1984)
<i>Nuclear</i>	UK Atomic Energy Authority (1954) British Nuclear Fuels (1971), Nuclear Electric (1990), Scottish Nuclear (1990)	British Energy (1996)

Post two decades of policy aimed at enabling competitive energy markets observations have persisted that major energy companies still dominated the industry particularly in the electricity sector (Helm 2003: 204; cf. Thomas 2006; Rutledge 2007; Mitchell 2008). This is partly because in the aftermath of the 1995 release of the ‘golden shares’, which had prevented re-sale, there ensued a frenzy of mergers and acquisitions across the sector. The newly created, smaller energy companies sought at this time economic efficiencies and market power through merging with, or purchasing, competitors thus reducing the potential for competition within the sector (Helm 2003: 242).

Alongside the series of Acts aimed at deregulation it was decided that, in response to ‘natural’ tendencies in the electricity sector towards monopolies, a new regulatory system would still need to be established (Helm 2003: 209; cf. Littlechild and Vaidya 1982). Gone was ‘national energy policy’ to secure certain levels of supply at certain prices, and national energy companies to provide such supplies with the support of

monopoly status and the Treasury. In their place the new regulatory framework for electricity had an economic formula, of price-cap regulation, at its heart. The technical formula, otherwise referred to as RPI-X, was designed by the UK Treasury economist, Steven Littlechild, such that utility prices could increase annually by inflation, as measured by the Retail Price Index (RPI), minus 'X' which represented set efficiency gains (Helm 2003: 209; Thomas 2006: 598).⁴³ The system was intended to mimic a competitive market, protect consumers against strong price increases by the privatised energy companies but also, importantly, to provide incentives for greater cost efficiency gains as any gains above those set (at 'X') could be passed onto shareholders.⁴⁴

Privatised regional energy companies (RECs) benefitted financially from this formula as they could strip out inefficiencies, reduce capital expenditure but still, through mergers, maintain dominant market positions. It could be argued, as will be seen below, that the emphasis on this kind of return system contributed ultimately in a high degree of underinvestment in electricity networks in the UK (CEPMLP 2006). There was pressure on Littlechild to re-set the formula in the early 1990s, as some REC values quadrupled. They had experienced very high profits, had paid generous dividends to shareholders, giving an impression to consumers, many of whom were still bound to certain providers, of being fat cats getting rich on consumers' dependence on them for electricity. Littlechild resisted such pressures, however, preferring to view the price cap mechanism as a 'technical' device whilst arguably under-estimating political and social impacts (Helm 2003: 210).

3.4 Physical Structures of Governance

If we look now to how the PEPP level, physical structures of governance, was constructed we can also discern a little more about the idea of depoliticisation as method, and as an active political process, in implementing neoliberal economic ideas. Changes made to the machinery of government display *how* depoliticisation was achieved on an institutional basis, and is an example of a process of 'technocratic' depoliticisation in practice. A detailed look at the way in which the physical structures

⁴³ RPI-X was otherwise known as the 'incentive formula' (Thomas 2006: 598).

⁴⁴ The recognition that regulation would still be required suggests a regulated market system (cf. Moran 2003; Mitchell 2008; Lindstrom and Buller 2011) for energy, albeit much of the regulation was designed around creating conditions for competition and to keep end prices from escalating.

of governance evolved over this time is also evidence of the ways in which certain ideas became enshrined within institutional mandates and capacities.

As has already been mentioned both Prime Minister Thatcher, and Nigel Lawson, had sought to hire ‘likeminded people’ to work at the Department of Energy as, certainly initially, energy privatisation was still reasonably controversial and had the backing only of a small group within the Cabinet (Helm 2003: 44 and 76). Hence those key economists, who had written extensively on energy sector reform, as well as those who could be expected to ‘tow the line’, were employed to oversee the process of denationalisation and liberalisation. As we shall see in section 4.1, the method of getting the right people involved in policymaking was also used in the process of dealing with the coal-mining sector.

The decision, in 1992 when at least some of the process of privatisation and liberalisation had taken place, to abandon the DoE and the concurrent role of Secretary of State for Energy, is interpreted here as revealing in many ways. Not least in that it embodies the claim that the Conservatives had actively sought to depoliticise energy (Helm 2003: 386), but this time in a ‘technocratic’ sense whereby responsibility for decision-making was passed further from Government. It is also revealing of the extent to which political contestation in energy, which had taken place in the early, ‘normative’ part of the process of reform, had begun to level off. The drop in political contestation might be assigned to the degree to which neoliberal economic ideas had become institutionalised by this time, particularly boosted by the end of the Cold War and the ‘capitulation’ of socialism, but also to the growth in North Sea oil and gas supplies, and the shrinking manufacturing sector while international supply was strong and prices were low.

It is important to consider some other institutional implications of abandoning the DoE. The existence of the Department had been considered as signifying that energy was politically important whereas Margaret Thatcher’s opinion at that time was that the title Department of Energy “...smacked of economic planning ... whereas our energy needs should be supplied by the market” (Thatcher in Blackhurst 2004). Also gone with the DoE was the role of Secretary of State for Energy. This meant that energy was no longer represented at Cabinet Level further impairing active political consideration and reinforcing both ‘deliberative’ and ‘technocratic’ depoliticisation. Also important in

terms of the institutional structure inherited by New Labour, the structure from which this thesis will measure governance change in the 2000s, was that responsibility for energy policymaking came to lie with the Department for Trade and Industry (DTI) and for energy efficiency with the Department of the Environment. This is significant partly, as will be argued in detail in chapter seven, because the DTI's mandate was to provide support and regulation for British business and to provide for competitive markets, not specifically to ensure security of energy supply.

What is also worth highlighting is the way in which energy was further depoliticised, in a 'technocratic' and 'deliberative' sense, with this change. This is because the new Energy Directorate, by being a sub-section of a bigger institution no longer commanded direct Cabinet Level representation and was such less on the agenda for discussion. With the 'technical' experts so firmly in charge, elected representatives in the form of generalist politicians would have less and less need, or opportunity, to consider energy issues, becoming over time arguably less and less able to do so (Interview 12; Helm 2003).⁴⁵ The technical experts, at arm's length from government's elected representatives, had in addition less capacity to place energy policy within broader objectives of collective social policy given that DTI objectives were primarily designed around supporting business, and consumer preferences were increasingly treated as exogenous (Helm et al 1989: 55; cf. Mitchell 2008). This is, in turn, a reflection of the de-emphasising of 'social' aspects of energy policy referred to in section 3.2 above.

The two new institutions created to regulate electricity and gas, the Office of Electricity Regulation (OFFER) and the Office of Gas Supply (Ofgas), are another case in point of 'technocratic' depoliticisation. These institutions were not created as government departments but as 'independent' bodies funded by gas and electricity industry participants albeit given statutory objectives which had been defined in the Gas Act 1986 and the Electricity Act 1989 (HMG 1896 and 1989). The primary objective, for both institutions, was to oversee the market for trading and to defend consumers through introducing, and later maintaining, competition (Mitchell 2008: 139). These mandates can be understood as a direct outcome of thinking, referenced above, that competition breeds efficiency leading to lower consumer prices.

⁴⁵ See chapter five for more detail on the 'de-skilling' of the UK state in energy (Interview 12). This also ties in well with Hay's conjecture that de-politicisation might result in the loss of policy-making capacity (Hay 2007: 83).

There are two further institutional outcomes of the dominance of pro-market thinking over energy policymaking, and of the ‘technocratic’ depoliticisation of energy. The first is the impact on how energy was analysed, or actively understood, within the energy division of the DTI and at the regulator(s). Despite the initial healthy scepticism of “...detailed mathematical, statistical, and econometric analysis...which had prevailed in the Austrian school...” (Helm 2003: 60), there emerged over time a strong tendency among policymakers to analyse energy quantitatively using bounded models (Interviews 1, 2, 5, 12, 14 and 15).

Over the course of the 1970s much time and energy, in the UK and the US, had been put into developing large-scale mathematical models of particular fuels or of the energy sector as a whole. In 1967 the ‘Energy Model Group’ had been set up within the DoE and this formed the basis of the new energy division within the DTI. It was understood, by the architects of new energy policy, that these models could

...contribute very little to such fundamental political and social issues as whether the production of energy should be left to the market or made subject to government planning, or what national goals should be aimed at. Nor can it say what consideration should be given to national self-sufficiency, international relations, unemployment and the quality of the environment (Littlechild and Vaidya 1982: 22).

This quotation indicated that models were seen, by one of the key architects of the PEPP, as being able to help clarify the consequences of such choices, but not take away the need to make such choices in the first place. This was, perhaps, a salutary lesson that became lost over time in the way that energy governance practices became increasingly taken for granted and separated from initial detailed knowledge.

Elected MPs can be understood as the method through which the requirements of individuals and groups become represented in governance practice. By withdrawing them from the process, through ‘technocratic’ and ‘deliberative’ depoliticisation in energy, these interests were less likely to be represented, neither were questions about what national goals should be aimed at or the quality of the environment. As will be seen in the next chapter, by the mid to late 2000s, the DTI was indeed being criticised for being too focused on quantitative analysis that did not allow for decisions which might lead to change, flexibility and response to the evolving international energy environment (Helm 2005c; Mitchell 2008; Giddens 2009). This in turn might suggest

that some of the detailed nuance of complex theories can get lost in the process of uncritical political practice over time (see Watson 2005).

The second institutional outcome was the way in which energy provision, by ‘the markets’, became intertwined with and dependent upon private finance such that it has had an active institutional role to play in supporting the market-based approach to energy. Energy liberalisation and privatisation took place alongside the ‘Big Bang’ liberalisation of London’s financial centre often referred to as ‘the City’. Trade in and finance of energy became over this period increasingly ‘sophisticated’ as the role of derivatives, global trading and commodity exchanges and speculation grew (cf. Smith and Emshwiller 2003; McLean and Elkind 2003). The City has, therefore, had a strong hand in the marketisation of energy in that the role of financial markets in energy trade and supply has expanded rapidly (CEPMLP 2006: 6; cf. Youngs 2009).

4. Overcoming Challenges to Neoliberal Energy Governance

This chapter has so far painted a picture of an emergent energy policy paradigm which could be described as ‘depoliticised’ both in the sense of the planned, and to a great degree successful, withdrawal of the state from the energy industry, and in the sense that active political deliberation, debate and some skills in energy management had started to dwindle. Academic analyses of energy by the end of the 1990s reflected the pro-market political consensus by tending to approach energy policy analysis by assuming competition, cost efficiency and low state involvement as *fait accompli* rather than as social construct (Egenhoffer and Legge 2001; Mitchell 2002). As Joseph Stanislaw and Daniel Yergin so famously observed in 1998

(w)hat Joseph and Thatcher started is no longer radical but rather very much the heart of a new consensus in Britain (Yergin and Stanislaw 1998: 390)

Looking back from the late 1990s, when marketised energy had become so entrenched ideationally and institutionally, it might be easy to forget the degree of challenge faced down by the Conservative Administration. Some difficulties associated with privatising electric utilities in a socially ‘fair’ manner and with the general lack of competition which ensued (Helm 2003; Thomas 2006; Mitchell 2008), have already been raised in sections 3.2 and 3.3 above. Aside from ‘natural’ tendencies towards larger, dominant energy companies (cf. Littlechild 1981) there were other difficulties that the

Conservatives understood as necessary to surmount in order to introduce ‘economic’ efficiency into the energy sector, and to allow for competition.

4.1 Coal and the National Union of Mineworkers

As suggested by Oliver and Pemberton, old paradigms are not replaced until the “...battle to institutionalise the new paradigm...” has been won (Oliver and Pemberton 2004: 419). One of the key battlegrounds in terms of implementing the PEPP was over coal. Coal had held a strong position within Britain’s recent history, not least with regard to its role in fuelling the industrial revolution. The coal industry, as such, had once been at the heart of British industrialisation, a major employer, and had become, for many over time, a way of life. For some the miners had represented the heart and soul of the Labour party, they personified the ‘working class’ and their heroic struggle (Helm 2003: 67). The British Government had long supported coal, financially, but this was something that the Conservative Administration had hoped to dispense with (Fine 1990; Walker 1991; Helm 2003; Thomas 2006). Coal had managed to maintain its position as a much-needed source of electricity, despite its low efficiency versus other sources, partly due to its position as a domestic source of energy. As suggested, the oil shocks of the 1970s had reinforced the idea of keeping support for coal, and nuclear, as a part of energy policy.

Key political protagonists within the Conservative party, not least Margaret Thatcher and Nigel Lawson, had different ideas about the coal sector (Helm 2003: 67). These ideas were, arguably, based on core ideological differences. Thatcher, and Lawson, had long argued for the need to ‘break the back’ of the Unions which they saw as a fundamental obstacle to economic efficiency and which they referred to as ‘the enemy within’ (Helm 2003: 67). As one observer noted at the time

the Government appears to be motivated by... hostility to the miners... bound up in an ideological preference for the markets which specifically involves coal imports... whatever the ... wider economic and social implications (Fine 1990: 182)

Ideas about the unions played out as part of the construction of the ‘Winter of Discontent’ narrative, which was widely aired within sections of the British media, which placed blame for the 1970s economic crisis on ‘strikers’ as ‘enemies’ of Britain (Hay 1996: 263).

There are those who have argued that Thatcher was keen, in a way, for battle with the NUM to commence as this might provide an opportunity, finally, to break the Unions but this is far from clear (Walker 1991: 166-9; Helm 2003: 7). As part of the process of privatisation of the electricity network Conservative policy was to start withdrawing support for coal prices, and for the sector as a whole. In response the National Union of Mineworkers (NUM), under Arthur Scargill, supported a policy of no mine closures in the mid 1980s. Given the fall in demand for coal domestically and internationally, the shrinking British manufacturing sector, the strength of the British Pound and Conservative policy on reducing support for coal this was to ultimately prove an impossible ask on behalf of the NUM.⁴⁶ Changes in British law, including the 1980 Coal Industry Act and the 1984 Trade Union Act, a shift from coal to oil to gas for electricity supplies, and the strategic build-up of coal stocks all allowed the Conservatives to prevail over the striking miners. Another key component in fighting off the challenge from the Unions was to replace those personnel who were considered not up to the battle even in advance of the start of the strikes (Helm 2003: 76-77). Even before the national strikes of 1984 Lawson had had key personnel replacements made at the heads of the National Coal Board and the Central Electricity Generating Board in anticipation of what was to come (Lawson 1989; Helm 2003: 77).

The incident, however, arguably serves as a salutary reminder of how integrated coal, and energy more broadly, had for some time been within wider social and national political issues. These lingering social aspects of coal, and its position as an indigenous source of energy, meant that, even with a reduction in state support under the Conservatives, it continued to be subsidised throughout the 1980s and 1990s (Thomas 2006: 590; cf. Helm 2003). Coal, and ongoing state support for it, remained a key contradiction within the PEPP, particularly later as New Labour supported carbon dioxide emissions reduction whilst at the same time subsidising coal production (Helm 2003: 303). The residual legacy of state support for coal, as indigenous source and large-scale employer, however is another sign of the degree to which elements of old policy paradigms can continue even under a new system (Hall 1993: 280).

4.2 Alternative Narratives Challenge the Institutionalisation of the PEPP

It is worth, however, considering how alternative narratives of energy policy fared over this time. A review of articles from the journal 'Energy Policy' in the mid-1980s

⁴⁶ Particularly as coal was at the time still heavily subsidised in Germany and France.

confirms that, while the UK was going through the early processes of energy marketisation, wider governance questions used more often to run alongside analyses of more narrowly defined technical questions (Lehmann and Hough 1983; Chesshire 1986; Webb 1985; Cooper 1987). What is apparent from this debate is that, certainly in the 1980s and early 1990s, there was still clear ability and willingness to question the emergent PEPP from a critical perspective. This critical debate fell away over the course of the 1990s as political consensus was maintained, and even expanded internationally, and as energy was increasingly understood as a secure, rather than politically contested, area.

The first common thread within this debate revolved around calls for a greater role for the state in energy governance through the provision of a national ‘strategic framework’ and ‘national management of the energy sector’ as opposed to the continued withdrawal of the state apparatus from the energy sector (Ezra 1983; Keegan 1985; Hope et al 1986; Rodriguez 1987; Fells and Lucas 1992). The problem that was being identified at the time, to which we will return in chapter six, was that even as government receded further from a central management role in energy, exacerbated by the dissolution of the Department of Energy in 1992, questions of how to provide policy that addressed national collective issues still needed to be considered. One specific problem identified was that energy, as a sector requiring notoriously long-term investment planning, would need a forward looking, co-ordinated, national approach if sufficient investment were to be made for national security of supply (Owens 1986: 5). This was considered a particular difficulty for the PEPP given the Conservatives stance as ‘anti-planning’ (Stern 1987: 501).

Delegation of responsibility to ‘the markets’, and a ‘do it yourself’ approach to environmental regulation, was also considered at the time to have potential consequences for the ability of energy policy to respond to social considerations, particularly the environment (Hope et al 1986; Cooper 1987). This viewpoint was expressed well by Owens in his 1986 article:

(m)arket forces also have no way of deciding the weight to be attached to the death of a snail darter compared to, say, the death of a worker at an accident at a nuclear power station (Hope et al 1987: 6)

This is an argument which has come to form a significant part of the debate on energy policy in the late 2000s specifically with regard to the inability of the market model to

make qualitative decisions about sustainable energy (cf. Mitchell 2008; Giddens 2009; Scrase et al 2009).

This critical debate also raised concerns about creating an institutional framework for energy governance with monetarist principles and targets, particularly aimed around reducing the PSBR, at its heart. It was feared that one of the outcomes of such a framework would be that Government would not be able to meet its real energy objectives which critics understood as still, ultimately, being the secure and affordable supply of energy (Webb 1985; Stern 1987; Rodriguez 1987). Rodriguez further specified that by making energy policy about the achievement of a competitive market in energy, governance was no longer even designed with specific energy objectives in mind (Rodriguez 1987: 464).

There were other concerns expressed about the consequences of not debating energy, and energy policy, publically or in other words of emerging ‘deliberative’ depoliticisation (Hope et al 1986; Stern 1987). In particular, Jonathan Stern had noted the absence of any energy coverage in the 1987 General Election campaign, the drop in political debate about energy policy since 1979, and the lack of up-to-date published energy projections. His concern was that there would be a lack of public acceptance and awareness of important decision on major energy projects (Stern 1987: 498). It was later observed that the relative absence in political debate about energy had ultimately resulted in a lack of awareness, under New Labour, of international energy events and the way in which the energy environment was developing (Blackhurst 2004). The findings of this analysis, in chapter four, would support this conclusion.

This debate could also be seen as extending to questions of energy affordability, previously a core objective of energy policy. Clearly under the Welfare State questions of access for all households had been paramount. Although the Conservatives did stick with some welfare policies to help poorer households afford energy, such as hardship payments in bad weather, the question of affordability did not go away despite falling international energy prices. Whilst Conservative critics of welfare provisions continued to oppose them pointing to the ‘paternalism’ involved, many households continued in ‘energy poverty’ (Helm et al 1989: 55).

One method of dealing with those that sought to challenge the new paradigm, and some of these academics had been involved under the previous paradigm, was simply, as with the miner's strike, to replace them or otherwise exclude them from policymaking circles. This is where Thatcher's 'one of us' policy came into its own. A specific example of this was the replacement of Derek Ezra as head of the National Coal Board (Helm 2003: 77). Thatcher had labelled Ezra "an appeaser" (Thatcher 1995: 342 in Helm 2003: 77), and Lawson had doubted his commercial credentials (Helm 2003: 342), but there might have been more to their desire to replace him. Ezra had been a keen supporter of a greater role for the state in energy governance and was also supporter of political action to prevent further climate change (Ezra 1983). Much of what Ezra was writing about in 1983 is still relevant within climate and energy debates today.

The replacement of key personnel was one core part of the Conservative strategy to disperse alternative narratives within the policymaking debate. Another method might be considered in the support that much of the British media gave to the Conservative Administration, certainly for much of the 1980s (Hay 1996). Stern's observations, above, about the lack of discussion of energy matters within the 1987 election debates, or 'deliberative' depoliticisation, may well have been underpinned by low(er) energy prices in comparison, certainly, to the 1970s. To the degree that low energy prices have often equated to public interest, those, such as Ezra, who supported changes to energy policy to recognise social issues, such as climate change, did not at this time enjoy wide public interest or support.

Conclusion

Conservatives had claimed 'revolution' in terms of their redesign of economic governance. Certainly, with regard to energy, it was widely claimed that the reforms being carried out constituted a radical break with recent history as well as something unseen elsewhere in the Western world (de Oliveira and MacKerron 1992: 157; see also Rodriguez 1987; Helm 2003; Thomas 2006). The degree to which this new policy paradigm, the PEPP, had become institutionalised within the UK was, however, later underpinned by the international expansion of 'market' energy – to Australia, the US, the EU, Eastern Europe and, often under the advise of the World Bank, to a number of other developing countries (de Oliveira & MacKerron 1992: 157). By the early 2000s,

some experts had come to believe the international energy economy had been fundamentally transformed over the 1980s and 1990s by the expansion of market institutions, and commodity and financial markets (Egenhofer and Legge 2001: 3; Mitchell et al 2001: 176; see also Hayes and Victor 2006). Pro-market energy originally ‘pioneered’ by the UK, and Chile, had spread around the world (Thomas 2006: 583; Scrase and McKerron 2009: 5).

It might be worth posing questions, however, about how the emerging lack of political deliberation and contestation of energy policy, and the decline in physical institutions of governance, compares with previous periods of relative silence on energy. As Derek Ezra has pointed out in his book on energy policy, which takes on historical lenses, debate about energy has tended to ebb and flow over time (Ezra 1983: 202; see also Leaver 2005; McGowan 2008). This ebb and flow has been historically related to periods when energy has been considered to be ‘in crisis’, as in the 1970s, and this perception is often related to the ascendance of energy prices. It might also be suggested that ‘secretised’ depoliticisation has also played an historic role in the degree to which publics did not engage regularly with questions of energy and its supply. Because decisions about ‘defending’ access to oil have, over time, tended to be made ‘behind closed doors’, publics appear to have little idea of the cost of defending access to oil and gas nor of details in terms of the role Britain has played (cf. Keohane 1984; Bromley 1991; Painter 1992).

CHAPTER 4:

The Pro-Market Energy Policy Paradigm 2000-03: Challenge and Compromise

Introduction

By the time New Labour took office in 1997 a new energy governance system, the ‘Pro-Market Energy Policy Paradigm’ (PEPP), had been established despite some difficulties experienced, particularly in the early to mid 1980s. This chapter will open with the claim that despite the change of government, which could theoretically have presented a firm test for the new paradigm, the PEPP did not markedly shift. The period from 2000 to 2003, which is to be analysed here, is understood as one largely of continuity in energy governance. This analysis of UK energy governance over this time period will be supplemented, as with the analyses of the two subsequent time periods, with further theoretical analysis in chapter seven.

Ideological commitment to the PEPP, despite Labour’s social roots, was apparent from the start. Judged on Labour’s first term in office it could be argued that the PEPP came to represent an even more depoliticised, in ‘technocratic’ and ‘marketised’ terms, system than that under the Conservatives. Furthermore the PEPP was increasingly underpinned by the internationalisation of the UK energy model which had been taking place in the US, Europe and other developing countries, often via conditionalities associated with World Bank, and IMF, lending schemes. This was, importantly, supported in turn by the demise of the principal ‘challenger’ in terms of political models with the collapse of the Soviet Union and subsequent decisions by ex-Soviet states, most significantly the Russian Federation, to adopt a process of privatisation and liberalisation in their energy sectors.

Conversely, however, Labour’s first term in office can also be marked down as a period of mounting challenges to pro-market energy emanating, largely from outside the UK energy establishment.⁴⁷ This period bore witness to the ‘Enron scandal’, the California energy crisis, rising energy prices, and a related but brief spate of fuel protests in the winter of 2000. In addition, and importantly, the Government was becoming

⁴⁷ The energy establishment is taken here to be those in Ofgem and the DTI directly involved in energy analysis and policymaking, as well as those third parties, such as Ernst & Young, who were chosen to provide extra analysis and advice.

increasingly aware that UK North Sea assets were depleting at such a rate that the time horizon within which the UK would start importing oil and gas again was narrowing quickly. Not least, this period also saw growing commitment to carbon dioxide reduction targets alongside emerging evidence of underperformance in this area, particularly evident in the Royal Commission on Environmental Pollution (RCEP) report of 2000 (RCEP 2000).

In response to the realisation that the UK would become an importer once more and to the critique of climate policy, Tony Blair announced that the Performance and Innovation Unit (PIU), which reported to him in this instance to ‘Number Ten’, would conduct a review of UK energy policy. This review represented quite a challenge to the PEPP, on a number of levels. However between the issuance of the Energy Policy Review in 2002 and the production of the Energy White Paper in 2003 many of the more challenging suggestions had been omitted. The 2003 White Paper did, however, commit *energy* policy for the first time to two new, separate ‘social’ goals: those of lowering carbon dioxide emissions and of reducing energy poverty. This appeared, on the surface, to be a change to the objectives of energy policy, one of the ‘levels’ of the PEPP. The conundrum that this chapter seeks to answer is, however, how the objectives of energy policy could seemingly change without much other accompanying signs of paradigm shift.

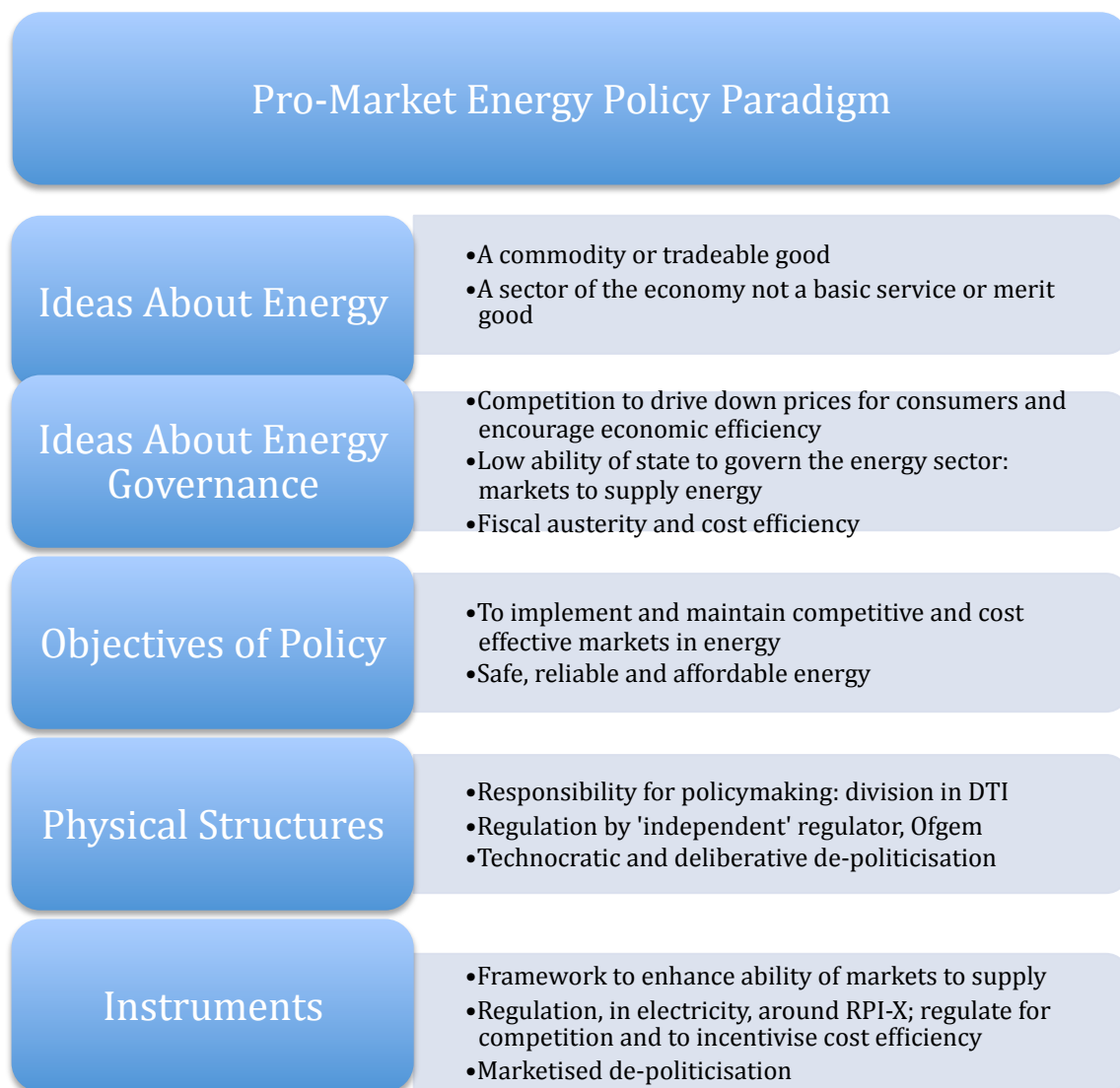
This contradiction will, in part, be explained by arguing that certain effects of both ‘technocratic’ and ‘marketised’ depoliticisation led to quite a high degree of resistance to other aspects of paradigm change. In addition, carbon dioxide reduction targets were not legally binding and were seen within parts of the Energy Directorate and Ofgem, the two bodies most responsible for devising and carrying out energy policy, as more indicative than necessarily binding, or even realistic. Furthermore, the 2003 White Paper proposed that the new objectives could and should be met using existing methods enshrined within the PEPP.

1. New Labour, Normalised Neoliberalism and Internationalisation of Market Energy

The previous chapter laid out in some detail the intellectual and political backdrop underpinning the processes of creating the PEPP. This section will continue to build

towards a detailed picture of the PEPP as of the year 2000, the starting point of the period under review in this thesis. This is the system of energy governance, against which change will be measured and is outlined in Table 3 below. This section will also seek to show the degree to which pro-market energy had become embedded within the UK political system by 2000, as well as internationally making it further resistant, to a large degree, to change.

Table 3: The Pro-Market Energy Policy Paradigm in 2000



1.1 Labour in Opposition

In the meanwhile, in a vast drama, the state continues to withdraw from the commanding heights, leaving it more and more to the realm of the market. This represents a great reconnecting - a conjoining of the beginning and the end of the twentieth century. The century opened with markets ascendant and an expanding global economy, buttressed by a spirit of optimism. (Yergin and Stanislaw 1998: 390)

Reflecting the quote above from one of the many books claiming the benefits of widespread ‘market’ orthodoxy at the end of the 20th century, this section argues that far from altering the PEPP, the New Labour Government failed to offer any lasting ideational challenges to the premises upon which many levels of the PEPP rested, but they also actively completed energy sector, electricity and gas, liberalisation (Helm 2003; Thomas 2006; Rutledge 2007; Keay 2010).

It might have been expected, around 1997, that Labour would pursue more profound changes to the way in which energy was governed, not least based on the position taken in opposition on various aspects of the energy system (Rutledge 2007: 904). Prior to 1997 a lively debate had taken place within the party ranging from those who wanted to reverse privatisation, through those who wanted to reform and those who were happy to stick with the ‘status quo’. Some of those in favour of reform supported a change in the institutional architecture and changes to the primary duties of regulators, Offer and Ofgas, away from an overwhelming emphasis on promoting competition and cost efficiency towards recognising wider social interests, including, for some, the environment (Helm 2003: 287). In opposition Labour had made easy targets of ‘fat cat’ utilities which, they exclaimed, were run primarily for the benefit of shareholders and top executives, and which were not reflecting consumer needs (Blair in Helm 2003: 273).⁴⁸ In addition Labour had been reportedly, at best, ambivalent to the all-important concept of competition in energy markets (Helm 2003: 295).

Certainly Labour had maintained a more pro-environment narrative than had the Conservatives before them and had made some commitments to pursuing carbon dioxide emissions reduction in the 1997 Manifesto (cf. Carter 2001: 120). Specifically they had committed to:

... put concern for the environment at the heart of policymaking, so that it is not an add-on, but informs the whole of government... (New Labour 1997)

⁴⁸ In 1997 New Labour implemented a one off ‘Windfall Tax’ on utilities. This tax was criticised in that if ‘lax regulation’ had been the reason why such utilities, or ‘fat cats’ in previous Labour terminology, had made so much money then the regulation should be fixed. Rutledge, however, suggests that this tax was a device used by New Labour to draw a line under the past and to prevent further questioning of the existence of a privatised and deregulated energy sector (Rutledge 2007: 904).

It was notable within the Manifesto, however, that the commitment to environmental policymaking was the last of the nine big changes that New Labour were, at the time, promising.

By contrast, however, Labour had not voted against the “Lawsonian” 1995 Gas Bill, which had laid the ground-work for domestic gas supply competition (Rutledge 2007: 903). As it happened, New Labour continued in their first term in office with plans for electricity sector liberalisation, which had been put in place under the Conservatives, as well as with a very overt commitment to the role of competition, as will be seen in more detail below. September 1998 saw the initial ‘opening’ of the domestic electricity market to competition, run largely by the independent regulator Offer, and the process was completed by May 1999 (Helm 2003: 270).

1.2 The PEPP in 2000: Energy and Domestic Energy Governance

If New Labour’s first Energy Report, in 1997, can be seen as a holding document (DTI 1997), then the second Energy Report, in 1998, can be seen as an early indication of their new-found commitment to private sector energy supplies and to competition (DTI 1998b). It stated that the objective of energy policy was “...to ensure a secure, diverse and sustainable supply of energy at competitive prices” (DTI 1998b: 5). The 2000 Energy Report further noted that the key to achieving these was “...competitive markets and companies...” (DTI 2000c: 7).

The Utilities Act 2000, which some had hoped would result in tougher regulation for utilities companies more broadly ended up, in effect, being an Energy Act. It set out the merger of Offer with Ofgas to form a new regulator, the Office of the Gas and Electricity Markets (Ofgem). Under the Utilities Act, this independent, economic regulator would also have more power than the previous incarnations (Mitchell 2008: 138) in pursuing its primary responsibility to

...protect the interests of consumers, present and future, wherever appropriate by promoting effective competition between persons engaged in... the generation, transmission, distribution or supply of electricity... (Ofgem 2006: 107)

As already mentioned in chapter three, Ofgem emerged as a principal advocate of the role of competition in energy governance and a defender against any state intervention in electricity and gas markets (Mitchell 2008; Tutton 2009; Scrase et al 2009).

Increased powers meant more ability to do so. Aside from the merger of gas and electricity regulators, the physical structures of energy governance remained the same. The subsequent review of energy pricing, the ‘RPI-X’ model, also resulted in a lack of change. The model was maintained, despite accusations that it had resulted in a lack of investment in key infrastructure with the focus having been on cutting costs and asset sweating under these conditions (Helm 2003: 344).

Therefore, although elements within Labour had been outspoken critics of the PEPP when in opposition they continued not just to maintain, but also to further embed, it once in power. Some might argue that this was position was adopted partly out of convenience (Interview 12), but this could also be due to the extent of New Labour’s buy-in to the intellectual ideas of Conservatives overall and the degree to which they had already become embedded in existing institutions of state (cf. Hay & Wincott 1998; Watson 1999; Williams 2005; Gamble 2009). Matthew Watson has, in turn, suggested that commitment to some neoliberal policies, such as financial liberalisation, reflected the need to gain a strong electoral foothold with the Middle Classes, where ‘Old’ Labour had traditionally fared less well (Watson 2002: 198; cf. Bevir 2005). It might also, however, be worth raising the question of the need for core corporate support in order to maintain a position of power in UK politics, and the big utilities were not in support of different, or further, regulation (cf. Interview 14).

Continuity in commitment to competition, and its key role in delivering policy objectives, was echoed across early policy documents, including the 1998 Competition White Paper (DTI 1998a; Rutledge 2007). The objectives of energy policy were stated as being the “...secure, diverse and sustainable supplies of energy at competitive prices...” (DTI 2000a: 8) and it was understood that competitive business conditions would have a key role to play in meeting these objectives. This excerpt encapsulates the thinking of the time well:

(c)ompetition itself brings with it benefits for consumers, for companies and for security of supply. Consumers enjoy lower prices, better choice and higher standards of service. Companies are given the incentive to innovate by the drive to provide ever more desirable products and services. Competition also plays a vital part... using the price signal to indicate when and where new investment should take place and encouraging a wide range of suppliers and sources of energy. (DTI 2001: 1)

The same report goes on to claim that competition will also drive environmental innovation, the ‘sustainability’ element of supply, in private companies as they strive to respond to consumers who will become more environmentally aware (DTI 2001: 5). As such competitive conditions were still not only a stated objective of energy policy but also the means of achieving that objective (Rutledge 2007: 904).

Other primary drivers of the PEPP such as cost efficiency (Tutton 2009: 3; cf. Helm 2003), and the understanding of governments as relatively inefficient in terms of economic governance remained at the heart of policymaking (Mitchell 2008: 138). Thus the continued commitment to markets bearing responsibility for energy supply, or to ‘marketised’ depoliticisation:

(m)arkets can be a more effective instrument for delivery of government policy than more traditional mechanisms (DTI 2001: 2)

The extent to which this perspective had become embedded within energy governance systems was also reflected within third part advisory reports (cf. DTI 2005b; Ernst and Young 2006). Ian Rutledge has suggested that even a cursory reading of policy documents from the late 1990s and early 2000s

...reveals the extent to which New Labour and its advisors had come to espouse a particularly ‘fundamentalist’ view of the role of ‘competitive markets’ in achieving energy policy objectives (Rutledge 2007: 902)

The active academic debate of the 1980s, when energy was being restructured, had largely dissipated by the late 1990s. So much so that a 1997 review of the UK energy literature concluded that “...(p)rivatisation remains the godsend of the last decade to economics research...” (Weyman-Jones 1997: 899). A 2006 review confirmed that outside of neoliberal economic and technical fields very little research was being conducted into energy (CEPMLP 2006). Privatised and liberalised energy markets were increasingly being analysed as ‘fait accompli’ as opposed to social construct (Egenhoffer and Legge 2001; Hayes and Victor 2006; cf. Helm 2005c; Mitchell 2008).

1.3 The PEPP in 2000: Foreign Policy and International Relations

Continuity in terms of the dominance of pro-market ideas about governance, and of the central notion of positive economic inter-dependence, was reflected in the arena of energy foreign policy, and foreign policy more broadly (cf. Lee 2004; Williams 2005). However, due to the degree of ‘deliberative’ depoliticisation in energy and in the

absence of any specific international strategy, it is a little difficult to consider energy as a concrete area of foreign policy at this time. As highlighted in chapter three, much of the way in which energy has featured in international relations over the past century had been related primarily to ensuring stable access for net importers of energy, specifically oil, at ‘reasonable’ prices. As a net exporter of both oil and gas during the 1990s, and in the absence of any shocks or periods of high prices, perceptions of the international energy environment remained positive. This was reflected in the early Energy Reports and statements from key policymakers, such as Stephen Littlechild, which suggested that they were “...sanguine about security, both in the short and in the longer term” (Rutledge 2007: 905).

What was clear, however, is that to the extent to which energy did feature in UK foreign relations it was largely through active encouragement of the UK energy model abroad, in Europe, Russia and beyond (Davies 1996: 502; Helm 2003: 372; cf. Timmins 2006). In the case of ‘emerging economies’ this was often to be achieved through advice and ‘educational assistance’ to assist in the process of energy governance reform, as was the case with Russia and other Eastern European countries (Davies 1996; House of Lords 2002; Interview 1). Much of the thinking behind promoting the liberalisation of oil markets and pricing had been to prevent ‘states’ from impacting negatively upon the international oil trade and smoothly functioning markets were understood to be the ‘best insurance’ for continuing security of supply (Youngs 2009; Lesage et al 2010: 6; cf. PIU 2002: 7). In addition, it was expected that increased competition would drive exporters to expand capacity (Mitchell et al 2001).

As an example, some sections of the 1998 White Paper on how to build “competitive modern markets” were focused on New Labour’s drive to “open markets” abroad and to “...ensure competition in international markets...” (DTI 1998: 51). And there is little doubt that many did believe in the UK’s success so far both in implementing such conditions in the home market (DTI 1998: 51; PIU 2002) and in encouraging their uptake abroad (PIU 2002: 21; Helm 2003: 372). The International Energy Agency (IEA) proposed that the UK energy policy model should be used by other countries wishing to reform their energy sectors (IEA 1998 and 2006a; see also Friedrichs 2010). The Economist held the UK up as ‘the poster-child’ for liberalisers (Economist 2003).

This aspect of policy pursued under the PEPP was underpinned by general New Labour support for the expansion of deregulated capitalism, multilateralism, free trade and liberalisation (Watson 1999 and 2002; Coates and Hay 2001; Williams 2005; Dunne 2008). As Coates and Hay have argued, Blairism, like Thatcherism, saw itself

...both as an ideological project for export, and as one whose domestic success requires the resetting of international (and particularly of Western European) institutions and practices in its image. (Coates and Hay 2001: 448)

It also found support from a wide base of domestic interest groups, particularly in the corporate sector, such as the Confederation of British Industry (CBI) (House of Commons 2007d). ‘The City’ arguably also has had an interest in the expansion of competitive markets in energy as the role of the financial and commodity markets in facilitating energy trade had, by this stage, expanded considerably (CEPMLP 2006: 6; Youngs 2009: 6; cf. Helm 2003). The International Petroleum Exchange for example, based in London, had through the 1990s established itself as one of the world’s largest futures and options exchanges and, as such, had a vital institutional role to play in facilitating and supporting a market-based approach to energy (Youngs 2009: 6). Trade in natural resources including futures and options, and particularly with the advent of the ‘Mega Btu-Marketers’ like Enron, was now very big business indeed (Rutledge 2007: 903; cf. McLean and Elkind 2003; Smith and Emshwiller 2003).

New Labour, in the interests of supporting its Manifesto commitment to ‘enterprise’ and UK Plc, were unlikely to stand in the way of such business interests, something which might also be negatively perceived by its new ‘Middle Class’ voter base (New Labour 1997; see also Bevir 2005; Watson 2005). Furthermore, it has been claimed that Irwin Stelzer, member of the board of Enron and “employee and confidant” of Rupert Murdoch, had a direct line to New Labour which he used to strongly and regularly encourage further energy liberalisation (Rutledge 2007: 903).

The idea that the neoliberal economic paradigm could and should be exported beyond the Anglo-Saxon sphere was reinforced by the collapse of the Soviet Union in the late 1980s and by the accompanying, self-reinforcing, rhetoric of the ‘end of history’. This sense that there was a lack of any credible alternative politico-economic model was felt strongly among key political elites in the UK (Kaletsky 2010: 273; cf. Yergin and Stanislaw 1998; Williams 2005), and arguably impacted upon the ability of competing

political protagonists to suggest profound change based on alternative narratives. Moreover, Russia's adoption of a process of political reform based upon aspects of the pro-market model, including privatisation of its considerable energy assets, was seen as further proof of the victory of the 'Western' model as it extended to energy (Fukuyama 1992). In the unipolar moment of the 1990s it was increasingly assumed that there were no credible alternatives. This arguably fed into the degree of 'deliberative' depoliticisation already in existence and further encouraged a lack of understanding, or even recognition, of different political models. Diplomacy was increasingly conducted both as an extension of business relations and by experts from the business community as if those were the negotiations that were now more worthwhile (Lee 2004; Williams 2005).

As such the 1990s had emerged as a period within which neoliberal economic ideas were widely understood to represent the new "common sense" (Watson 2002: 187) and of a "...zeitgeist in support of the markets..." (Hogan 2003: ix). Likewise acceptance of a limited role for the state in energy had reached a position whereby it was referred to as "conventional" wisdom in the UK and beyond (CEPMLP 2006: 4; cf. Mitchell et al 2001; Jaffe et al 2006). Further diffusion of the pro-market model more broadly was undertaken through international institutions such as the World Bank (WB) and the International Monetary Fund (IMF) (Watson 2002) and these institutions played a specific but related role in furthering the pro-market energy model internationally partly under the auspices of "*good governance*"⁴⁹ (de Oliveira and McKerron 1992: 157; Youngs 2009: 8; cf. Rufin 2003).

The pro-market energy model was to be institutionally underpinned as the 'norm' through the Energy Charter Treaty Protocol (ECT), modelled on the General Agreement on Tariffs and Trade (GATT), which was designed to put these trade norms on a legal footing, assisted by a comprehensive dispute settlement mechanism. Russia, having 'come in from the cold', and Norway both signed the ECT thereby creating the first international energy trade agreement which included significant net exporters as well as importers. This was widely understood as a profound step forward given previous tendencies for political agreements, based around oil, coal and other energy sources, to fail (Keohane 1984; Strange 1988: 193; McGowan 2008).

⁴⁹ Italics author's own.

1.4 The PEPP in 2000: Climate and Renewable Energy Policy

It is well worth understanding, at this stage, a little more about how climate policy was treated within this energy governance model. Clearly climate objectives had not represented a formal commitment for energy policy under the Conservatives. The primary commitment to ‘clean’ energy under the Conservatives had come in that they did openly recognise the idea that greenhouse gases cause global warming (Thatcher 1995: 640; Helm 2003: 346; Vogler 2009: 2685). This recognition led to a report entitled ‘This Common Inheritance’ (Department of Environment 1990), which included a target to reduce carbon dioxide emissions by 2005, and some environmental legislation – most notably the bans on leaded petrol and chlorofluorocarbon (CFC) refrigerators. The carbon dioxide reduction target was, however, easier to meet than expected given the large reductions in coal usage and the decline in UK manufacturing, and it was met early, by 2000 (Helm 2003: 347; cf. DETR 2000; Mitchell 2000). It is also worth noting that the emissions target was not legally binding, and reiterating that it was not an objective that *energy* policymakers were formally required to achieve.

Outside of specific laws to phase out leaded petrol, the prevailing UK view was that the markets would, in time, “demand” renewables (IEA 1998: 67), that competition would provide for renewable energy (DETR 2000; cf. Rutledge 2007) and that targets to reduce carbon dioxide emissions would need to be balanced by other economic demands (DoE 1990; cf. Bernstein 2001; Carter 2001). In the late 1980s, partly to take account of the politics of the early 1980s recession, the UK adopted a definition of ‘sustainable development’ that included possibilities for economic growth, a definition which became widely adopted.⁵⁰ Indeed, economic growth was understood as key to achieving sustainable development, and it was further argued that that the UK economic model already conformed to such sustainable growth (Jacobs 1991: 59; see also DoE 1988). This clearly implied commitment to bearing the future environment in mind, without having to change many energy governance practices today.

As already suggested in chapter one, questions of which definition of ‘sustainable’ should be used to underpin policies towards the environment raise another important

⁵⁰ ‘Green’ environmentalists argued, on the other hand, that economic growth and environmentally sustainable development are not positively inter-related in that environmental protection does mean constraints on economic activity (Jacobs 1991: 59)

question, of how dominant political ideas had come to colour responses to environmental science and claims about man's relationship to climate change. Even once political elites had accepted the need to act to reduce carbon dioxide emissions, a wide variety of political action, or inaction, and other responses emerged dependent upon dominant 'worldviews' (Rayner 2009).⁵¹

This is where we return to Steven Bernstein's notion of the liberal-environmental compromise, otherwise known as 'climate capitalism', whereby neoliberally informed political elites take on responsibility to act in response to climate change but do so on their own ideational and political terms (Bernstein 2001). Bernstein's excellent analysis provides a detailed account of how scientific concerns about environmental protection emerged, through concern about economic growth and poverty reduction, into a single framework of 'sustainable development' (Bernstein 2001: 29). Terminology, previously common in environmental reports such as the 'Brundtland Report', of "managing" the environment moved to terminology of "developing", more in line with notions of a reduced role for government institutions (Bernstein 2001: 59).

As already suggested New Labour could be marked out from the Conservatives in that they claimed a greater degree of political commitment to the need to mitigate climate change, as well as narrative in opposition to nuclear. Their 1997 election manifesto had committed to specific carbon dioxide emission cuts of 20%, over 1990 levels, by 2010 (New Labour 1997). They also put forward a target whereby 10% of electricity should be supplied by renewable sources, also by 2010 (Mitchell and O'Connor 2004: 1937). Not much was included in the manifesto, however, about *how* this target might be achieved which has been, perhaps, one of the key weakness of climate policy under New Labour – the gap between stated aspirations and ability to meet them. For example, after taking office a review was conducted into the feasibility of meeting the renewable target, the Renewable Energy Review (DTI 1999). The ensuing response suggested that the UK would work towards the 10% target, but provided very little in terms of concrete policy to facilitate the target (Mitchell 2000: 287).

⁵¹ For example, in Germany and Sweden much legislation has already been passed, including 'risk free' feed-in-tariffs (Germany) and carbon taxes (Sweden). Both countries have managed to substantially increase the percentage of renewable energy in the overall mix, as well as reduce carbon dioxide emissions (Ragwitz et al 2005; Mitchell 2008; Giddens 2009).

Also not long after taking office the ‘Marshall Report’, led by an industrialist Lord Marshall, was commissioned to look into which economic instruments could be used to enable carbon dioxide emission reductions (Kern 2009: 129). The Climate Change Programme was launched, a key component of which was the establishment of a Climate Change Levy (CCL). The levy was to be advanced on business, not residential, energy users ostensibly in replacement of the Fossil Fuel Levy (FFL) which had been in operation since 1989 (DTI 2000b: 27).

Given the opposition it generated this was the first real test of Labour’s commitment to carbon dioxide reduction targets. The CCL was introduced in 2000 but when, particularly fuel-intensive, industries objected a number of exemptions and alterations were made along with the notion of giving something back to business (Kern 2009: 129-30 and 147; see also Carter 2001: 120; Helm 2003: 356). Negotiated agreements were reached such that large industrial energy users, companies and regions, could agree carbon dioxide emission reduction plans in exchange for reductions in CCL payable. Fuels for electricity generation, petrol, and diesel were exempted, and reductions in national insurance contributions were put in place to offset some of the effects of the CCL (Rutledge 2007: 906).⁵²

A second key component of the Climate Change Programme was the establishment of a Carbon Trust (CT) which was set up as a ‘business lead’ organisation, separate from, but funded by, Government, in order to assist in the transition to a low carbon economy (Kern 2009: 160). The CT was seen as a body which could help in the ‘delivery’ of transition through improving communication and dialogue, and also by recycling some CCL receipts (Kern 2009: 130). One in depth review of this organisation, based on a wide range of interviews within the CT, has suggested that it represented yet another attempt to keep energy and climate change free from political interference. The dominant assumption was that by having the “freedom to operate” separately from government departments this organisation would be able to make objective, non-political decisions and therefore achieve much more (Kern 2009: 131)

⁵² This is another example of New Labour’s understanding that in order to get policy through they would need to design it such that key corporations would be able to accept it. For more detail on this see (Kern 2009: 147-149).

In that the CCL can be seen as a replacement for the Conservatives' FFL, and in that it was overtly committed to being independent of state interference, continuity in actual climate policies adopted can be claimed, despite the greater rhetoric on targets. Also consistent with Conservative policy on renewable energy, New Labour continued initially with the Renewable Non-Fossil Fuel Obligation (NFFO), which had been in place to support 'low-carbon' energy production since 1990. Given the status of nuclear energy as 'low carbon' the NFFO had gone largely to supporting nuclear energy production since its inception, in 1988, such that in 2000 renewable energy accounted for only 3% of electricity production (Helm 2003: 350; cf. Mitchell 2000; Mitchell and Connor 2004; van der Horst 2005). One analyst and government advisor has suggested that the NFFO was never about supporting renewables specifically in that it had been adopted in 1990 only in order to facilitate the privatisation of the electricity system (Mitchell 2000: 293-4).

When the NFFO came to an end in 2000 a new obligation, the Renewables Obligation (RO), was placed on electricity suppliers to purchase certain percentages of low carbon electricity from renewable sources. Commitment to a renewables policy was an achievement in itself given the long debate, which took place within the Energy Advisory Panel, prior to this as to whether to have a specific renewables policy or not. Despite a high degree of opposition, from the pro-nuclear lobby and 'laissez-faire' economists, it was decided to go ahead with a specific renewable policy in place of the NFFO (Interview 14; cf. Mitchell 2000).

Alongside the RO a new aim was adopted which was to achieve 3% of electricity generated by renewables by the end of March 2003, rising to 10.4% by March 2011 (Rutledge 2007: 906). The RO was, however, technology non-specific in that it was recognised that "...it is no longer the job of Government to pick winners or to introduce artificial distortions into the marketplace" (DTI 2000b: 3; cf. Mitchell 2008: 126). Furthermore it was decided that a price cap would be applied - ostensibly to protect consumers given New Labour's commitment to keeping electricity prices in the "...lower half of the EU/G7 basket" (DTI 2000b: 3; see also Rutledge 2007: 906). The price cap operated as a 'buy out' element whereby electricity companies could escape the obligation if it appeared too costly (Rutledge 2007: 906). The RO was accompanied by some, given the overall requirements of developing renewable research, development and production, small capital grants which, despite protestations about not

picking winners, were allocated to particular sources of energy over others, i.e. onshore wind over energy from waste (DTI 2000b: 3).

A further institutional problem for Labour, other than being seemingly out of new policy ideas, was the existing set-up of energy and environmental governance structures. If the plan was to use energy policy to meet climate goals, as was implied in DTI documents, then this was made more difficult given the omission of specific climate objectives for energy policy. In addition the Department for the Environment, Transport and Regions (DETR) had historically held ultimate responsibility for ‘sustainable development’ (DoE 1990; DETR 2000), but elements within the DTI considered their analysis to be “wooly”, non-quantitative and unconvincing (Interview 5; Interview 13).⁵³ Under the PEPP as of 2000, the UK’s Climate Change Programme was more of a DETR affair pursued largely alongside, rather than integrated within, energy policy (cf. Helm 2003: 361). As such there was an understandable sense within the DTI’s energy division was that climate change was not their priority (Interview 13). Again, as already mentioned above, there was still considerable belief within the DTI’s energy division that markets would deliver on investment in and production of renewable energy (DTI 2001: 2).

2. Emerging Challenges for Energy Policy

The PEPP, characterised in Table 3 above, appeared by the start of 2000 in many senses to be firmly institutionalised. The period following immediately after presented, however, a wide series of challenges, which served partly to underpin the competing climate perspective outlined in chapters one and two. The UK Continental Shelf was depleting at a faster rate than expected thereby bringing closer the date that the UK would have to start importing oil and gas again. In addition, various other events had started to raise doubts in some minds about energy supplies and the efficacy of the current political model to deliver.

⁵³ The DETR had been the Department of the Environment (DoE), and was merged with the Ministry of Agriculture, Fisheries and Food in 2001 to become the Department for Environment, Food and Rural Affairs (DEFRA).

2.1 Mounting Challenges

One of the first real problems that Labour had to face in the energy sector was the expiry in 1998 of the coal contracts, which had supported the price and quantity of coal purchased by generators. A new deal needed to be done and Labour, as the traditional and vociferous supporter of coal in opposition, were put on the spot. A white paper was drawn up to address this issue, which committed to further support for the coal industry whilst stating that such measures would be temporary (DTI 1998b). This was a difficult position to take given theoretical commitment to keeping state intervention low, but also given the energy policy aim of keeping energy affordable. This can be taken as an example of the New Labour trying to maintain its newly acquired wide coalition of interests and of trying to maintain the support of all parties (Helm 2003: 302; cf. Watson 2002; Bevir 2005).⁵⁴

As already suggested, as the early 2000s progressed it became increasingly apparent that oil and gas supplies from the UK Continental Shelf were in quite rapid decline. It was expected that the UK would become an importer of both gas and oil by around the mid-2000s, with imports rising very quickly over time (JESS 2002; Helm 2003). This reasonably significant change to the UK position within the international trade of oil and gas prompted, in part, the formation of a new group called the Joint Energy Security of Supply (JESS). JESS was made up of officials from the DTI and Ofgem and was formed in 2001 (JESS 2002: 3).

Around this time questions started to emerge about the UK's capacity to import gas in large quantities, partly due to a lack of storage facilities, and about levels of ongoing investment in energy infrastructure (JESS 2002: 4; Interview 13; RAE 2002: various; cf. Rutland 2007: 921). The Royal Academy of Engineering (RAE) issued a report suggesting that change was needed in order to facilitate substantial investments:

The Government should reassess the limitations of the market and market mechanisms as the basis for planning and funding new capacity that would lead rather than lag the needs of network users (RAE 2002: 5)

Rutledge's analysis of UK energy policy at this time suggests that New Labour, and the DTI, ignored this advice (Rutledge 2007: 921). Certainly specific JESS responses to

⁵⁴ For commentary on Labour's continuing understanding of the 'importance' of appealing to the middle class vote see: <http://www.guardian.co.uk/politics/2011/may/21/ed-miliband-labour-middle-classes>.

growing perceptions of the need for more investment were based around the need to further reduce “barriers or distortions” to market investment (JESS 2002: 4).

The international context was also changing, although New Labour remained remarkably complacent about these changes until well into the mid 2000s (PIU 2002; DTI 2003). Venezuela, under Hugo Chavez, rejoined OPEC in 1999 and OPEC were committing themselves, again, to genuine production constraint supported by non-OPEC producers such as Mexico, Norway, Oman and Russia (Rutledge 2007: 908). By the end of 1999 oil prices had doubled, albeit from an all time low at the start of the year. In 2001 the Venezuelan National Assembly had passed a new Hydrocarbon Law effectively re-nationalising Petroleos de Venezuela S.A. (PdVSA).

Concerns about prices, capacity, and levels of excess stocks available, were highlighted at the time of the ‘mini’ energy crisis during the cold winter of 2000. In scenes not untypical of historical moments when energy had become subject to raised levels of public interest, protests had flared up about rising petrol prices which, in September 2000, were the highest they had been for ten years. Fuel protesters started to picket refineries, described by Tony Blair as the ‘Achilles heel’ of the UK fuel industry, and real fears that supplies would be affected started to mount (Blair 2010: 292). The pickets, combined with the shock of high prices after such a prolonged period of falling prices, caused a rush to petrol stations and considerable pressure on surplus stocks (Helm 2003: 390).

It is briefly worth noting how Prime Minister Blair claims to have responded, politically, to the pickets in that it signals a clear contradiction with prevailing ideas about energy governance and markets. Blair was highly aware of public fears about supplies and harboured genuine concerns that petrol would not be able to flow properly from refineries to petrol stations, which generally require re-stocking every 48 hours.⁵⁵ In his words “...(w)ithout the refining plants, no blood flows to the arteries...” (Blair 2010: 292). His response was to “...stamp his political authority all over the situation...” with the help of the army and police. His proposal to the police was that

⁵⁵ Blair thought that the Winter fuel protests of 2000 resulted in a strong dip in Labour’s performance in the polls which, just ahead of the general election in May 2001, was seriously bad news (Blair 2010: 297).

drivers should be instructed to cross picket lines with the help of the police, or be 'sacked'. In addition, if necessary, the army would be drafted in to drive lorries and deal with any violence from protesters (Blair 2010: 296). The treatment of the perceived threat to the UK's 'lifeline', i.e. supplies of energy, marks a strong contrast with the idea of energy as replaceable commodity, and to faith in the ability of markets to supply. It suggests the continued existence at this time of the more old fashioned notion that threats to energy supplies can be viewed as a national security issue which requires the state, or in this case Prime Minister, to take ultimate responsibility. This, in turn, raises questions about the degree to which the PEPP was perceived as such a successful model because of low energy prices, rather than because it was a particularly appropriate system for energy governance.

This was, in addition, interpreted by some as an early warning to Ofgem and the DTI where assumptions were being made both about lower prices being a direct outcome of liberalisation and about this being an ongoing condition (Helm 2003: 390). Depletion policy under the PEPP was now also beginning to open up to debate, especially given rising prices and the UK's changing import-export position. It was observed that privatisation, and private sector companies' tendency towards shareholder returns, had encouraged "...producers to produce and sell as much gas as possible as fast as possible..." (Stern 2004: 1968; see also Kemp & Stephen 2007; Interview 13). Connections started to be highlighted between competition, liberalisation and an energy sector driven by cost reduction and the risks of local shortages to consumers through a lack of additional stocks being held by private companies (Mitchell 2002: 6).

A couple of higher profile events, the 'Enron scandal' and the 'California electricity crisis', served to highlight the energy sector on a wider basis, beyond those institutions, and their advisors, directly involved in energy governance (Helm 2005). California in particular raised questions about security of supply (PIU 2002: 7). As California's electricity sector had been liberalised in 1996, largely following the 'UK model', so when the blackouts of 2000 hit concerns were raised about the UK model (PIU 2002: 15; Helm 2003: 387). Further critiques, although not particularly high profile, followed of privatisation and liberalisation in energy – particularly marking electricity out as an area where such models do not function well (Borenstein 2002; Timney 2004). These critiques could be seen as important given the degree to which the market model was being encouraged via various IGOs in the developing world.

The ‘Enron scandal’, however, was less referenced in energy circles, despite the interest shown from academics and other analysts interested in the corporate and financial systems and market manipulation (see Friedrichs 2004; Widmaier 2005; Watson 2008). Gross accounting malpractices, amongst other illegal dealings, were uncovered towards the end of 2001 and Enron plunged from its position as the largest international energy trader, and significant political lobbyist (Rutledge 2007: 903), to filing for bankruptcy by December 2001 (Hogan 2003: x). Enron, primary amongst the ‘Mega Btu-Marketers’, was seen as a primary enabler of the marketisation of energy. Certainly its management had claimed that it was “leading the fight for competition” and that it was capable of allowing customers and suppliers to strike whatever bargains they found mutually advantageous (Stelzer 2002 in Rutledge 2007: 903). Its demise, in such shocking circumstances, was widely covered, and its business practices condemned (Eichenwald 2002; Smith and Emshwiller 2003; McLean and Elkind 2003).

This scandal, however, raised more questions in political circles about white-collar crime (Friedrichs 2004), and the popular prosecution of individuals, than it did lasting investigation into systems of energy regulation or into pro-market energy trade and governance.⁵⁶ It was barely mentioned in UK energy policy documents except to comment that Enron’s collapse, as the largest energy trader, had impacted on the supply of electricity to the market (JESS 2002: 5; PIU 2002: 77).

2.2 Concerns about Climate Policy

New Labour came to office with the luxury of a decade of falling carbon dioxide emissions caused by the growth in gas over coal usage for electricity generation.⁵⁷ They could, therefore, afford to maintain a high profile pro-climate narrative whilst not needing to address much change to existing structures of governance. However, as the new century dawned it started to be suggested that the easy gains of the past were going to be difficult to replicate in future (DTI 2000a: 48; RCEP 2000: various; Helm 2003b: 4).

⁵⁶ The new play ‘Enron’, on Broadway and London’s West End, is lasting testimony to the popularity of this scandal, and the ways in which portrayals of white-collar crime have broad appeal.

⁵⁷ Coal usage had dropped from 74% of overall energy in 1960 to 18% in 1998, gas had risen from zero to 34% in the same time period (RCEP 2000: 67). Gas represented 43% of the UK’s primary fuel mix by 2000 (PIU 2002: 20).

Even Government projections about future emission reductions did not, by 2000, look positive. A DTI paper reiterated that previous gains had been due to the reduction of coal in the energy mix, supporting again arguments for gas as *the* transition fuel. It also, however, noted that in 2000 electricity produced from renewable sources was still 5% - exactly the same as it had been in 1990 despite a decade of claimed support for renewables, read low carbon energy, via the NFFO (DTI 2000a: 32). As already suggested, the vast majority of NFFO support had gone to underpinning costly nuclear electricity production. The future for emissions from the transport sector looked negative (DTI 2000a: 48).

The Royal Commission on Environmental Pollution (RCEP), which had been set up in 1970 to advise the Queen and Parliament on environmental issues, and contribute to policy development, produced a significant report in 2000 (RCEP 2000).⁵⁸ Overall the, incredibly detailed and long-term report outlined a negative picture of UK achievements in terms of climate policy and its ability to meet emissions reduction, energy efficiency and renewable energy targets. Its concerns over UK policies were introduced thus

(a)ccess to abundant and instantly available energy underlies our entire way of life, yet its impact on the environment is growing. This poses a radical challenge for the UK; a challenge that cannot be met successfully unless the government's energy policies and its environmental policies are coherent. A sustainable energy policy for the UK should protect the interests of generations to come, but it must also seek to achieve social justice, a higher quality of life and industrial competitiveness today. Achieving the right balance is formidably difficult; current policies do not strike it. (RCEP 2000: 1)

The report clearly suggested that positive climate change mitigation could not be achieved through the current PEPP. Ideas contained in this report about the requirement for energy and climate policy to be devised coherently, and about the profound difficulties of balancing needs of consumers, business and environmental objectives will be returned to later.⁵⁹ As suggested by Rutledge the deep complexities associated with meeting various aspirations around energy and climate policy were,

⁵⁸ The RCEP was 'independent', but funded by DEFRA.

⁵⁹ It was expected that the cost of electricity would go up as renewables grew in the fuel mix, but there were still nearly four million homes living in 'fuel poverty' as of 2000 (PIU 2002: 29).

at this time, grossly underestimated (Rutledge 2007). Despite their overt commitment to achieving climate goals Labour did seem happy to rely on the existing system to deliver goals, such as those committed to at Kyoto, which was a position increasingly at odds with other environmental and climate groups.

Claims of multiple failings in UK energy and climate policy from such an established group were seen, in addition to the UK's changing import-export status, as requiring a response from Government (Helm 2003: 392). Environmental critics started at this time, particularly in the light of Labour's failure to make changes despite their 'green' stance in opposition, to lament. It seemed as if government believed that "...there is nothing that cannot be solved by the market" (Carter 2001: 63). This was at a time when countries such as Germany, Sweden and Denmark were already producing positive results, in terms of renewable energy production as well as emissions reductions, as a result of policies previously adopted (cf. Mitchell 2008; Giddens 2009).

3. The Performance and Innovation Unit (PIU) Energy Review 2002

The need to respond to mounting concerns about becoming an oil and gas importer, accompanied by increasing pressure to address climate concerns, were suggested as being responsible for a Review of Energy Policy conducted in 2001 (Blair in PIU 2002: 3).⁶⁰ The review was conducted by the Performance and Innovation Unit (PIU), set up in July 2000 as an independent think-tank which would, however, report directly to the Prime Minister's office. Furthermore, the 'Sponsor Minister' for the energy review was Brian Wilson, Minister for Industry and Energy, who also acted as chair to the Advisory Group (PIU 2002: 17). Hence claims that the PIU was, in practice, somewhat less than independent with only "...about half of the unit's project teams staff..." drawn from outside Whitehall (Interview 13; cf. PIU 2002: 168). There were further claims that the PIU energy review team was under-staffed and therefore too small to complete a really

⁶⁰ One interviewee, very closely involved in the PIU energy review, has suggested that the idea for the PIU came 'from number 10' in direct response to concern about dwindling UKCS supplies (Interview 13). Certainly the PIU does state that the review was requested by Tony Blair (PIU 2002: 15).

thorough review which speaks to the idea of energy governance institutions being under capacity (Helm 2003: 397).⁶¹

The review had three primary functions, “...to set out the objectives of energy policy... to 2050...”, “...to develop a framework for reconciling trade-offs among different objectives of energy policy...” and, most importantly, “...to develop a vision and strategy for achieving these objectives” (PIU 2002: 15). Although some have suggested that a further function of the report was to disarm political opposition by showing that government was, indeed, addressing these issues (Helm 2003: 394). Some members of the review team, including the team leader considered it to be a viable alternative to the PEPP and had hoped that it would result in policy change (Interviews 13 and 14).

3.1 The PIU Energy Review: Challenging the PEPP

The core stated aims of the review report were to consider how to address any challenges arising from the UK becoming increasingly dependent on imported oil and gas and the desire to deliver on increasingly demanding carbon reduction aims (PIU 2002: 6). As will be seen below, however, the primary focus of policy recommendations overall was on the area of meeting climate targets as it was considered that little change was needed to current systems to address energy security given the rather ‘benign’ international energy context (PIU 2002: 53; see also Rutledge 2007: 909). The review represented a curious mix of ideas from within climate narratives on energy, which challenged the PEPP, and ideas consistent with the PEPP.⁶²

As with other government documents on energy policy around this time, the PIU report dedicated much time and space to highlighting the importance of addressing climate change, but this review went further in terms of recommending governance changes to reflect these priorities. The review openly addressed some of the key issues which had been raised in the RCEP 2000 report by suggesting new targets for energy efficiency

⁶¹ This view contrasts with that held by some within the review team who insist that the review was able to offer the first, and last for some time, significant alternative to the PEPP (Mitchell 2008: 71; Interview 14).

⁶² This represents a rather different view to Ian Rutledge whose analysis of the PIU report suggested that it was an entirely pro-PEPP exercise (Rutledge 2007: 910). This analysis, however, of the PIU focuses in more detail on the climate policy sections of the report which suggest some quite significant challenges to ‘business-as-usual’ – particularly with regard to renewable energy sources.

and for renewables as a percentage of overall energy produced. It recommended that the target for the proportion of electricity generated from renewable sources should be doubled to 20% by 2010 and with a further 20% in the following decade (PIU 2002: 6). On their estimations meeting the 2020 renewables target would result in electricity prices of only 5-6%, higher than otherwise expected (PIU 2002: 11).⁶³ It was further recommended that energy efficiency targets should be changed such that an improvement of 20% should be achieved between 2002 and 2010 and a further 20% between 2010 and 2020 – this would serve to double the existing rate of improvement (PIU 2002: 10).

The emphasis on renewable energy marked this report out from UK energy policy, particularly given the ongoing debate, referenced above, about whether or not to even continue with a renewables policy. The PIU also represented a direct challenge to three of the existing levels of the PEPP – notably those of the objectives and instruments of energy policy and the physical structures of governance. The report suggested that the DTI should adopt a new energy policy objective:

*...the pursuit of secure and competitively-priced means of meeting our energy needs, **subject** to the achievement of an environmentally sustainable energy system* (PIU 2002: 52).⁶⁴

What is of particular note is the clear use of the term ‘environmentally’ in the objective. As we saw above both Conservative and Labour governments had been able to pursue climate policy which reflected Bernstein’s compromise of liberal-environmentalism by adopting an understanding of ‘sustainable’ energy which encapsulated a strong element of economic growth. The PIU review specifically recommends that the economic element be subordinated to the environmental element of sustainability within the new framework:

Energy policy trade-offs affecting the period to 2012 should generally give priority to carbon reduction if there is a material risk of failing to meet internationally-agreed emissions targets (PIU 2002: 52).

⁶³ This estimation was challenged by Dieter Helm who has suggested that it did not include core hidden costs (Helm 2003: 395).

⁶⁴ Emphasis author’s own.

This, in addition to changing the emphasis of energy policy, presented a direct challenge to the existing relationship between energy and climate policy whereby climate objectives could, and should, trump other energy policy objectives. The suggestion that environmental considerations should trump financial ones was an entirely novel suggestion within *elite* energy politics at this time (cf. Interview 14). Climate policy would, in addition, in practical terms have to be integrated within energy policymaking processes.

Reflecting this idea, in chapter eight on institutions, the PIU recommended the creation of a single government department for climate change, energy and transport policy (PIU 2002: 144). The report did, however, recognise that as this “...fundamental change to existing departmental structures...” might take some time to achieve, in the meantime a ‘Sustainable Energy Policy Unit’ should be established (PIU 2002: 6 and 144). Alongside energy and climate being re-politicised, or taken one step closer to public deliberation via direct representation at Cabinet level, the report also suggested much wider public involvement in energy. Specifically they recommend that an extensive and extended process of public review should be initiated before any commitments were made to implement findings – a review that would take energy out of the narrow realm of Departmental policymakers and associated experts (PIU 2002: 13). It was noted that the nation must not be “lulled into inaction” by the focus on long timescales in expert debates about energy and climate change. Instead they must be made aware of the need to act now (PIU 2002: 14).⁶⁵

In addition to this core institutional change the PIU dedicated a whole section of the report to providing “...justification for government involvement in energy markets...”, specifically to meet environmental goals (PIU 2002: 32-52). In terms of the PEPP level of instruments of policy, the report suggests the need for direct political intervention:

(m)ultiple policy interventions are likely to be required to achieve energy efficiency objectives, with a mix of regulations, negotiated agreements and incentives (PIU 2002: 111).

⁶⁵ This suggestion reveals the extent of frustration experienced by climate analysts about public inaction to respond to climate concerns which might be an indication of why some political protagonists later started to utilise fears about energy security to underpin arguments for change.

For example, direct government spending in research and development to support new energy efficiency and renewable energy technologies, taxation to raise the ‘cost of carbon’, and further regulation (PIU 2002: 42).

The report also raised the important, but politically ‘hot’, question of growing road and air transportation and its impact on carbon dioxide emissions. It suggested a tax on aviation (PIU 2002: 12) that Government should work to reduce transport demand (PIU 2002: 94) and new policy to support improved energy efficiency in vehicles (PIU 2002: 110).

3.2 The PIU Energy Review and Signs of Continuity

Alongside the changes to energy governance structures and policies suggested in the 2002 review, a dialogue persists in support of market liberalisation, competition and cost efficiency. The review does, in some senses therefore, also represent support for certain pro-market ideas and, as a result, for the PEPP level of ideas about energy governance (Rutledge 2007: 909). The report claims up front that the introduction of liberalised and competitive energy markets in the UK “...has been a success, and this should provide the cornerstone of future policy...” (PIU 2002: 5). Some specific benefits of liberalisation, it is stated, have been experienced by the ‘fuel poor’ as competition has driven down prices for end consumers (PIU 2002: 6). The report suggests, in line with usual DTI thinking, that liberalised markets and their extension to Europe have represented “...an important contribution to energy security...” (PIU 2002: 5, and 7).⁶⁶

What is particularly noticeable, when considering continuity in energy policy, is the various references to the “benign” and “healthy” environment for energy security, even given the UK’s move to importer of oil and gas (PIU 2002: 6 and 53-54). For example this observation that “... there appear to be no pressing problems connected with increased dependence on gas, including gas imported from overseas” (PIU 2002: 53). What is surprising is that the renationalisation of PdVSA, the Venezuelan oil and gas enterprise, and Venezuela’s re-entrance into OPEC are not mentioned as constituting a

⁶⁶ The language favourable to pro-market ideas, and achievements under the PEPP, might be viewed as a sign of the political awareness of those who wrote the report. They were aware of the changes that they were requesting to ‘business as usual’, but may have felt the need to temper these challenges with recognition of past achievements.

possible threat. The September 11 attacks, escalating energy prices and the 2000 refinery pickets are recognised but only in passing and as a signal to start thinking about future security. This, rather sanguine, perception of the international energy environment compares markedly to the narrative which emerges in the mid-2000s post the renationalisation of Russian energy assets and the Russia-Ukraine gas transit dispute.

The report could be read as a little lukewarm in parts about meeting emissions targets. For example it suggests at one stage that

...it would make no sense to incur abatement costs in the UK and thereby harm our international competitiveness, if others were not contributing (PIU 2002: 9).

The report does, by the same token, expect that the ‘international community’ may well start to set stringent carbon emission reduction targets that the UK would need to be ready to meet (PIU 2002: 5). In addition targets suggested appear still to be ‘aims’ which are not legally binding which would, in turn, not force change upon those less willing to be involved. These recommendations about emissions targets run alongside the rather different approach, referenced above, taken to adopting a serious approach to facilitating energy production from renewable sources.

Environmental observers, such as the Green Party, were also keen to point out other non-environmental aspects of the review (Green Party 2003). They point in particular to the decisions taken to keep the nuclear option open (PIU 2002: 6 and 12) and to the lack of commitment to making clear decisions which would lead to generators favouring renewable over fossil fuels. The PIU refers, in line with PEPP thinking, directly to this question:

(s)ome submissions to the review have suggested that Government should decide the fuel mix to be used for electricity generation. This review has rejected these proposals on the grounds that they would seriously distort the efficient functioning of the energy markets (PIU 2002: 7)

3.3 Competing Narratives within the PIU and Beyond

This mix of challenges to and support of the existing system reflects, perhaps, the mix of people involved in the review process and the need to balance views (Interview 13; Interview 14). Even within the review team individuals had different goals in mind reflecting competing energy perspectives – largely pro-market and climate. Some were

angling for quite significant change, while others were more comfortable with amendments around the existing status quo (Interview 13). On balance, however, the PIU review appears to have been the first directly Government sponsored report which raised serious questions about the existing energy governance structure but primarily in terms of how energy and climate policy should inter-relate in practice (cf. Mitchell 2008).

However, what ultimately happened to the PIU review suggestions shows that those involved in UK energy policymaking were not ready for change – from Number Ten down to Ofgem and the DTI (Interviews 13 and 14). The fate of the review is already hinted at in the introduction by Tony Blair, wherein he emphasises ‘choices’ faced by government and the idea of “keeping our options open” (PIU 2002: 3). This approach is re-iterated at the end of the introduction when the Prime Minister states that this report “...is not a statement of government policy...” (Blair in PIU 2002: 4).

One of those involved in conducting the PIU review, Professor Catherine Mitchell, has suggested that resistance to the PIU’s recommendations kicked in between the publication of the report and the 2003 White Paper which firmly returned “...energy policy to the current paradigm fold...” (Mitchell 2008: 122; cf. Interviews 13 and 14). Another analysis of energy policy at the time points out that the Treasury, DTI and Ofgem each became involved between the PIU and subsequent White Paper, in an effort to undermine support for its suggestions. Specifically it has been suggested that Callum McCarthy, then Chairman and Chief Executive of Ofgem, resisted the addition of a firm renewable energy objective or strategy (Helm 2003: 343; Interview 13). One insider suggested that Blair had considered the report to be a ‘step too far’ (Interview 13), others that it was only ever an exercise in ‘buying time’ (Helm 2003: 394).⁶⁷

4. ‘Our Energy Future: Creating a Low Carbon Economy’: 2003 Energy White Paper

⁶⁷ This appears to be an observation made in hindsight reflecting the period of negotiation, referenced here, that had gone on between the publication of the Energy Review and the production of the DTI’s White Paper in 2003. In 2002 Dieter Helm had claimed that the energy review marked ‘... a turning point in energy policy’ (Helm 2002: 5).

Liberalised and competitive markets will continue to be a cornerstone of energy policy (DTI 2003: 11; cf. DTI 2003: 15)

The Government neither immediately endorsed nor carried forward the majority of the PIU's recommendations of change to existing energy governance although it did follow more closely suggestions made with regard to energy supply which, anyway, did not imply much change. The 2003 White Paper overall reflected a combination of overt commitment to a lower carbon economy without adopting new ideas about *how* to achieve such a future, despite the range of alternative suggestions received from the RCEP and PIU reports. As such this White Paper was criticised as appearing to be 'radical' whilst, in effect, lacking in substance or any profound policy change (Helm 2003: 401; Mitchell 2008: 131; cf. van der Horst 2005).⁶⁸

4.1 The New Objectives of Energy Policy

In his introduction to the 2003 Energy White Paper, Tony Blair states that "(o)ur country needs a new energy policy..." primarily in order to meet the environmental goal of shifting the UK towards a low carbon economy but also in recognition of becoming an importer (DTI 2003: 6). This claim of new energy policy was met, however, almost exclusively through including new 'objectives' for energy policy. Under Hall's version of paradigm shift, and under the definition of the PEPP used here, new objectives ought to have been significant given the emphasis placed on the requirement for objectives to change for paradigm shift to take place (Hall 1993: 279). In this instance, the new objectives seemed to have appeared more as a means of buying time and nodding in the direction of climate protagonists seeking a greater degree of change, whilst otherwise maintaining the status quo.

In 2002 the primary stated objective of energy policy had remained the maintenance of a secure, reliable and competitive energy system. In the 2003 White Paper two important new objectives were added, arguably complicating, at least in theory, that which the DTI was committed to deliver:

- *to put ourselves on a path to cut the UK's carbon dioxide emissions... by some 60% from current levels by about 2050;*
- *to maintain reliability of energy supplies;*

⁶⁸ The White Paper was reportedly written by Tony White, a former City broker (Interview 13).

- *to promote competitive markets in the UK and beyond, helping to raise the rate of sustained economic growth and productivity;*
- *to ensure that every home is adequately and affordably heated* (DTI 2003: 11)

The two new goals, climate and energy poverty related, represented some change from the relatively limited goal of providing secure and reliable energy via competitive markets and improving cost structures that had previously been actively pursued (DTI 1998: 5).

4.1.1 Cut Carbon Dioxide Emissions

The environment at this point became one of the above ‘four pillars’ upon which energy policy would, according to Prime Minister Blair, rest (Blair in DTI 2003: 3). This does represent a departure from previous energy policy which did not include climate targets as formal objectives and as such should be significant, as discussed below, in terms of measuring profound governance change.

However, we can cast doubt on the significance of this particular new objective in a number of ways. The climate target formally adopted, again with direct reference to the RCEP, but not the PIU report, was nothing if not vague. Instead of just stating that the UK would meet a new, specific emissions reduction target, the actual commitment given was to “put ourselves on a path” to cut carbon dioxide emissions (DTI 2003: 11). The target itself, to cut by *some* 60% by *about* 2050, is equally vaguely worded leaving it open to interpretation as to whether it is a firm commitment or just an aim (DTI 2003: 11).⁶⁹ As will be seen more clearly in the next chapter, five, the DTI did not take this new target as necessarily precise or binding when considering energy policy (Interviews 5, 13, 14, 15, and 16).

Aside from the superficially exacting, but in reality rather vague, carbon emissions target the White Paper did not commit to the recommended renewable target of 20% of energy by 2010 – the commitment was maintained instead at 10% by 2020 (DTI 2003: 45). It has been suggested that DEFRA gave up on the 20% target in order to gain the DTI’s agreement that there would have to be a full White Paper review before actively supporting any nuclear new-builds (Interview 14). It has also been claimed that the nuclear lobby, which has been politically influential over time, was vociferously against

⁶⁹ Emphasis author’s own.

the 20% target and that they also battled hard to keep the target at 10%. This lobby is also understood to have been instrumental in reducing the five year moratorium on nuclear, recommended in the PIU report, down to an agreement that there would have to be a white paper (Interview 14).

The White Paper does little to suggest active genuine engagement at this stage, therefore, with those alternative narratives which had suggested different methodological approaches to achieving a low carbon future. As such, continuity of governance institutions, instruments and ideas was largely maintained at this time in that both the 2003 White Paper and the later, 2004, FCO report on energy almost exclusively emphasise the role of markets, competition and the private sector in delivering climate change goals (DTI 2003; FCO et al 2004). One more specific example of methodological continuity is the approach suggested to encourage renewable energy and energy efficiency:

... by making our intentions clear we aim to provide the signals needed for firms to invest – and to help British manufacturers to be ahead of the game in developing the green technologies that we expect to play a large part in the world’s future prosperity (DTI 2003: 13).

Other strategies, focused on international energy and climate relations, again displayed continuity. The paper made much of the role that the UK would play in international climate negotiations in terms of “showing leadership” in the attempts to bring more countries into the Kyoto Protocol (DTI 2003: 25). The UK’s limited, 2%, contribution to overall carbon dioxide emissions is re-iterated thus emphasising the idea that slowing climate change is a global, not precisely UK project (DTI 2003: 25). The other major commitment made is the adoption of the new EU emissions trading scheme (ETS), the first phase of which was due to start in January 2005, and making it “...a central plank of our future emissions reductions policies...”. Thereby again committing the responsibility of delivering carbon savings to “market signals” (DTI 2003: 29).

It is apparent, therefore, that only certain climate ideas were at this time taken up, many of them are used in the lengthy sections dedicated to showing that climate change is ‘real’ (DTI 2003: 6-9 and 22-24). Meanwhile, other specific climate policy ideas, such as those that challenge existing market-oriented governance structures as well as the 20% renewables target, were not followed. This approach chimes remarkably well with

Steven Bernstein's observations about the compromise of liberal-environmentalism discussed in chapters one and two (Bernstein 2001: 187). There is certainly no mention of allowing climate objectives to trump others within instances wherein 'trade-offs' arise, of significant political intervention to achieve climate goals, or of creating a new department combining responsibility for both climate and energy policymaking.⁷⁰ The emphasis was, in addition, more on future strategies, such as the EU ETS and further international negotiations, and less on adopting strategies now, thereby delaying possible judgement of success.

The White Paper did suggest continuing with a few non-economic, or more interventionist, instruments employed in the drive to reduce emissions, such as small capital grants and a more supportive approach to planning. The paper stated continued commitment for the Renewables Obligation (RO) whilst also leaving it open to review, but not until 2005 (DTI 2003: 46; Mitchell 2008: 131).⁷¹ The only practical difference in support for renewable energy at this point was an additional £60m of capital grants in 2002-05 spending review period (DTI 2003: 46), in spite of the emphasis placed on the desperate need for investment in renewable, and energy efficiency, research and development in both the PIU and RCEP reports. Certainly £60 million over four years looks like a drop in the ocean next to White Paper estimates that between £1.1 billion and £1.5 billion each year would be required to boost renewable energy only (Mitchell 2008: 131).

4.1.2 Ensure Every Home is Adequately and Affordably Heated

As has already been discussed, New Labour represented a wide coalition of interests and in energy, as other areas, policymaking needed in theory to address this range of constituents, including those less financially endowed. The second new policy objective for energy more specifically committed the DTI to addressing issues around energy poverty, which had been more indirectly alluded to in the previous objective by targeting affordable, as well as stable and reliable, supplies of energy.

⁷⁰ Although a new Sustainable Energy Policy Network was suggested, to be based in the DTI's Energy Strategy Unity but to be made up of representatives from the DTI, DEFRA, the FCO, the Treasury, the OPDM, DfT, the Scotland Office, the Wales Office and the Devolved Administrations (DTI 2003: 113).

⁷¹ As opposed to the NFFO which had effectively supported nuclear (Mitchell and Connor 2004; van der Horst 2005). In fact, the RO was described by one analyst, and government advisor, as an even more market-oriented system than the NFFO providing little real support for renewables (Mitchell 2008: 128).

The wording of the energy poverty objective is less vague than that used in communicating the climate objective but still contains a possible ‘get-out-clause’:

We aim that as far as reasonably practicable no household in Britain should be living in fuel poverty by 2016-18 (DTI 2003: 107).

Action on meeting energy poverty objectives, however, was slightly less focused on the future than that planned for climate targets as legal obligations had already been made under the ‘Warm Homes and Energy Conservation Act’ of 2000 (Rutledge 2007: 906). This White Paper formalised the target date(s) by which fuel poverty was to be, where *practicable*, eradicated (DTI 2003: 107).⁷²

It was claimed that achievements thus far in reducing energy poverty, to 3 million households in 2003 from 5.5 million in 1996, had been reached via ‘competitive’, read low, energy prices (DTI 2003: 107; see also Rutledge 2007: 913). And, to the extent that New Labour continued to ascribe such low prices to liberalisation and competition, the understanding was that maintaining such a framework would contribute, certainly theoretically, to further reductions. Of the 3 million households measured as being ‘fuel poor’ as of 2003 it was also suggested that “economic growth” could be expected to take 1 million out of fuel poverty by 2010 (DTI 2003: 107). Again, implying that specific energy policies would not be needed to ride to the rescue.

Ian Rutledge has claimed, however, that some slight complications were starting to arise between the laudable energy poverty objectives, and emerging views that energy prices would start to rise. To address this potential conflict the DTI had changed its commitments. As such the DTI’s mandate to deliver electricity prices that are in the lower half of the EU/G7 price basket was, at this stage, discarded. Instead what was instituted in its place was a commitment to ensure that the UK “...ranks in the top three most competitive energy markets in the EU and G7...” (Rutledge 2007: 913). This would, again, not require changes to policy as usual, nor to the commitment to the internationalisation of marketised energy.

No mention was made, however, of the potential trade-offs that might arise between growing the percentage of electricity from renewable energy sources, which are more

⁷² Emphasis author’s own. The ‘fuel poor’ were defined as those needing to spend more than 10% of their income to heat their homes.

expensive to deliver, and energy poverty (Rutledge 2007: 907). As we have seen, the PIU had suggested a 5-6% increase in electricity prices over expected levels if renewable targets were to be met, and these were viewed by others as being very much at the low end of expectations (PIU 2002: 11). The positive relationship between energy poverty and environmental measures is regularly highlighted – for example energy efficiency gains would serve to lower fuel poverty (DTI 2003: 107).

The effectiveness of this ‘new’ energy poverty commitment could really only be measured at some point in the future – but if measures adopted were not successful this would, *if* widely noticed, leave energy policy even more open to challenge.⁷³ This is all the more so as the 2003 White Paper committed so openly to existing instruments in achieving new objectives and it also committed the DTI to formally reporting on progress made in terms both of environmental and social, or energy poverty, objectives. In terms of considering the willingness of Government to commit energy policy to eradicating energy poverty, it is also worth noting that the number of households considered energy poor had fallen annually since 1996 and were, in 2003, at the lowest point for some considerable time (DTI 2011: 3).

4.2 The UK’s Fuel Mix Projections

It is worth spending some short time here considering the question of fuel mix. This was an important question as the Energy Directorate within the DTI was outwardly adamant that policy should be “technology blind” in strict contrast to previous planning practices (Mitchell 2008: 122). The 2003 White Paper overtly confirms, as have interviews undertaken in DECC and Ofgem, that it was widely understood that it was not the place of government to set targets for the share of total energy to be met by different fuels due to the belief that “Government is not equipped to decide the composition of the fuel mix” (DTI 2003: 11 and 87; cf. Interviews 1 and 15; Lawson 1989). The likely future UK fuel mix is by contrast, however, discussed at some length including, as above, the role of renewable electricity.

The objective of reducing emissions had placed the emphasis on relatively clean and sustainable energy– but renewables were only *predicted* to provide 20% of UK energy

⁷³ As it has transpired, DECC has reported that in 2009 5.5million households are still living in fuel poverty – a marked increase from 3m as of 2003 when the fuel poverty objective was added as a commitment for energy policy (DECC 2011)

requirements by 2020 and were not formally targeted to do so (DTI 2003: 12). However, other objectives of energy policy such as secure and reliable energy bring with them other commitments, commitments seen as fundamental (Interview 16). In response to the need for reliable energy the 2003 White Paper underpins the role of gas as a transition fuel. Gas had over the course of the 1990s been considered secure and reliable, not to mention convenient, due to indigenous production. The replacement of much coal with gas-fired electricity generation in the 1990s had already had a positive impact on carbon dioxide emissions (DETR 2000; RCEP 2000; PIU 2002), allowing New Labour in the 1990s to be vociferously pro-climate while not adjusting policy.

Gas was expected to play a major role in future UK electricity generation due to the relatively lower carbon emissions but also due to cost considerations (Helm 2003: 365).⁷⁴ The anticipated role of gas was also to be boosted both by carbon capture and storage (CCS) and new efficient boiler technology – both of which were expected to come online in the short to medium term. This perception of gas as *the* transition fuel, as will be argued in chapter five, was to be significantly challenged around the middle of the 2000s, specifically post the Russo-Ukrainian gas transit dispute.

Coal, as highlighted in chapter three, had historically been the British fuel, large indigenous supplies having facilitated the Industrial Revolution, and had been protected by state policy throughout much of the 20th century. The DTI in 1998 had done an, albeit temporary, deal to support coal further. However, the 2003 White Paper attempted a break with this tradition by suggesting that coal could only remain a significant part of the UK fuel mix in future “...if ways of reducing carbon emissions can be found.” (DTI 2003: 12)

Likewise nuclear was at this time out of favour, despite the indirect support it had continued to receive under New Labour via the non-fossil fuel obligation (NFFO) and consistent lobbying from pro-nuclear groups (Interview 13 and 14). The 2003 White Paper, in pointing out its lack of cost effectiveness and environmental concerns about waste, basically puts nuclear ‘on hold’:

Nuclear power is currently an important source of carbon-free electricity. However,

⁷⁴ For an interesting report on the arguments supporting gas as the bridge, or transition, fuel between a carbon and non-carbon economy see ‘Natural Gas: a Bridge Fuel for the Twenty-first Century’:
http://www.americanprogress.org/issues/2009/08/bridge_fuel.html

its current economics make it an unattractive option for new, carbon-free generating capacity and there are also important issues of nuclear waste to be resolved. These issues include our legacy waste and continued waste arising from other sources. This white paper does not contain specific proposals for building new nuclear power stations. (DTI 2003: 12)

What the White Paper fails to mention is that in 2002, when the privatised nuclear generator responsible for around 20% of electricity in England and Wales, faced financial crisis the Government has been ‘compelled’ to partially re-nationalise it (Rutledge 2007: 911). What can be taken from this is that an energy company was considered too important to fail, due to its position within UK electricity supply. This shows another important contrast between the PEPP, which so deeply influenced the practice of technocrats in the DTI and Ofgem, and other political reactions to perceived threats to energy supply.

The White Paper also raises the question of investment requirements, and not just in renewable energy and energy efficiency which has already been mentioned. Specific assumptions were made which underpin the need for further high degrees of investment – namely a higher percentage of renewable energy in the electricity mix impacting upon distribution capabilities and lower coal and nuclear electricity production (DTI 2003: 10). In the introductory section of the 2003 White Paper it is stated that one of the three main challenges facing ‘us’, aside from climate and declining indigenous supplies, is growing recognition of the need to update much of the UK’s energy infrastructure.

4.3 UK Foreign Policy and the Liberalisation Agenda

A reading of the international energy section of the 2003 White Paper reads like a very particular homage to ‘good governance’ in energy, positive economic interdependence and the growth of ‘freely trading’ energy markets. As Rutledge has suggested

(t)he free market fundamentalism already eminent in previous statements of New Labour’s energy policy was given full throttle in the White Paper of February 2003... As usual it was all going to happen via ‘competitive markets’ (Rutledge 2007: 911)

The PIU report had not recognised international energy events as requiring much in the way of policy response and the White Paper took the same approach.

Any analysis of UK foreign policy post 2001 should also be understood within the context of the September 11 attacks, and the subsequent launch of the War on Terror, particularly in that political capacity was very much focused on them at this stage.⁷⁵ In 2002 the JESS working group on energy security had already begun to build foreign policy considerations into its proceedings (Rutledge 2007: 911). In 2003 the Foreign Office for the first time produced a document outlining the 'UK's International Priorities' and included amongst those were securing environmental change and managing declining indigenous supplies of energy (FCO 2003). The emphasis of UK energy foreign policy, again such as it existed as a comprehensive foreign policy area, continued to be on multilateral co-operation to ensure open and competitive markets on a wider international scale (DTI 2003; FCO et al 2004).

The overall picture painted of the international context within which the UK energy markets would increasingly operate was overall 'benign', which could be seen as surprising given recent OPEC declarations, volatile energy prices and military invasions of Afghanistan and Iraq. Such a benign view might have been underpinned from a pro-market perspective, however, by the development of the Energy Charter Treaty (ECT), and its inclusion of two major energy exporters, Russia and Norway. This development was expected to provide a good degree of support to the process of internationalising free trade norms in practice. As has been suggested:

An international agenda for oil and gas is a sine qua non however, given the UK's increasing dependence on imports (CEPMLP 2006: 19)

The 2003 White Paper further suggested that oil and gas were in plentiful supply:

(w)orld wide fossil fuel resources are very large. Oil is the world's most important fuel, accounting for 40% of global primary energy consumption. That there is no

⁷⁵ This chapter does not have the space or capacity to question in detail claims that one of the reasons for embarking on the Iraq War was because Iraq has large supplies of oil (see for example Rutledge 2007: 912; Greenpeace 2006; Kaldor et al 2007). What can, briefly, be said is that fossil fuels seem to have coincided with British military action on many occasions since the second World War: Suez (route through which oil tankers travel); Iraq (large oil reserves); Afghanistan (major pipeline route); and now Libya (large oil reserves). The lack of overt political mention of access to fossil fuels as a criteria for war might be seen, however, as another example of 'secretised' depoliticisation, and might serve also to suggest the longevity of ideas about the importance of that access to Britain.

shortage of oil and gas resources globally means that supplies are unlikely to be disrupted for long... (DTI 2003: 79)

Assumptions about positive economic interdependence underpinned the idea that becoming an importer once more need not present too many difficulties (DTI 2003: 14).

This was more particularly due to achievements so far in liberalising markets:

(o)il and – currently to a lesser extent – gas are internationally traded commodities. And all countries, whether import-dependent or not, have a common interest in promoting open markets and predictable prices. (DTI 2003: 78)

It was also suggested that any potential future problems would most probably be based around “...global anti-competitive practices and illiquid markets...” (DTI 2003: 79).

Underpinning the DTI/FCO energy strategy, therefore, were ideas about the need to actively push for further political uptake of market rules and good governance abroad (DTI 2003: 80; FCO et al 2004: 14). The UK would continue to pursue economic reform in key producing areas and, as such, liberal markets would continue to serve as the most effective method of maintaining energy security (DTI 2003: 14 and 79). EU energy ministers had agreed an energy liberalisation package in November 2002, a package that the UK was considered to have instigated, and this was seen as a major step towards the development of liquid international gas markets and a further boost to energy security (DTI 2003: 81-82; FCO 2004: 13).

4.4 Suppliers and Diversity

Some thought was given over at this time to considering where oil and gas supplies would come from in future. In terms of oil, a high degree of faith was placed in the ability of international oil markets to underpin reliable trade at ‘market’ prices. In addition, some brief discussion was given over to UK support for IEA arrangements in the event of oil supply disruptions and to continuing to work to increase the transparency, diversity and liquidity in international oil market (DTI 2003: 81).

Where gas comes from was more important to consider from a pro-market perspective than oil as it was, and still is, largely traded on long-term contracts rather than ‘at spot’ in international markets. Norway is mentioned as the key provider of gas to the UK, given existing infrastructure in the North Sea, proximity to the UK and a new treaty which was, at the time of the 2003 White Paper, being put in place (DTI 2003: 79). Russia was also at this time mentioned as an important fossil fuel provider going

forward for Europe and the UK (PIU 2002: 64; DTI 2003: 80). The rate of production and export growth in Russian oil and gas had been significant over the course of the late 1990s and early 2000s and Russian fossil fuels had been filling the European supply ‘gap’ as the North Sea declined helping to keep prices stable. It was pointed out in the White Paper that

Russia has the largest gas reserves... and has been exporting gas to Western Europe for over 30 years without interruption (DTI 2003: 79).

In June of 2003 Vladimir Putin had paid an official visit to London and participated in a joint energy summit designed to progress the bi-lateral energy, and wider commercial, relationship. At the public press conference, which accompanied this event, President Putin and Prime Minister Blair announced that they had both signed the ‘memorandum of cooperation’ on the project to build the North European gas pipeline, otherwise known as Nordstream (Number 10 2003).⁷⁶ The idea was that Russian gas would reach the UK via the new pipeline system and a new interconnector between Belgium and the UK (DTI 2003: 80).⁷⁷ Although some emphasis in the 2003 White Paper was placed on supply diversity, the reality was that Norway would be providing the lion’s share of UK gas, with the intention that Russia would come second (JESS 2006).

In 2002 a House of Commons report on Russia raised the question of whether or not the EU should consider a more active role, on behalf of Member States, to “...lock in Russia as a major supplier of oil as well as gas over the next two decades, given uncertainties in the Middle East” (House of Commons 2002: 89). This excerpt gives us, perhaps, some insight into thinking about Russia’s potential role as supplier – as a more reliable alternative to the Middle East (Leaver 2005: 15; Allison 2006: 167). Russia’s progress, albeit slow, through a process of liberalisation and adoption of ‘best practice’ meant that they appeared to be a ‘more reliable’ supplier as much in terms of its previous track record as in terms of its adoption of a ‘better’ political system. In

⁷⁶ It has been suggested that Prime Minister Blair had been very keen to be seen to be quickly developing a relationship with the new Russian President, Putin. Blair was one of the first foreign dignitaries to visit Moscow and London had been one of Putin’s first official visits (Interview 19).

⁷⁷ In 2003 it also appeared that Putin had given his personal endorsement of the TNK-BP Production Sharing Agreement (PSA), which was by far the largest in Russia (Locatelli 2006; Brill Olcott 2004). The UK subsequently became the largest investor in Russia (Number 10 2003; Lee 2007).

addition, Russia was not a member of OPEC, and was signatory, as mentioned, to the ECT.

Further liberalisation of Russian gas markets was, however, understood as being necessary and should be actively encouraged by the UK, mainly via multilateral relations through the EU and IEA (DTI 2003: 5). This was important in terms of improving the investment climate for Russia and therefore the outlook for energy supplies:

...(t)he biggest single issue on gas pricing involves Russia and its very low prices for domestic (both household and industrial) supply. The danger is that low prices will deter investors from entering the market and new production capacity will not be developed, with negative effects on our security of supply (FCO et al 2004: 15)⁷⁸

In such a way, ideas about what liberalisation, competition and free markets could achieve in terms of international energy security and important investment in fossil fuels firmly underpinned UK energy foreign policy and decisions about suppliers. Theoretically, of course, Government should not need to make specific decisions about suppliers but even at this stage, given Putin's trip to London, it appears that some 'top down' involvement was understood to be required to secure supply deals. The decision to encourage direct supply relations with Russia, on the strength of their increased reliability given their 'pro-market' progression, seems highly ironic in hindsight and perhaps highlights the degree to which energy policymaking had been taken for granted and left with minimal dedicated capacity.

Conclusions

This chapter has emphasised an era, between 2000 and 2003, of consistency within the PEPP by painting a picture of a somewhat path dependent, conservative UK energy policy-making process. What is particularly notable, given Hall's emphasis on the role of changing objectives in measuring paradigm shift, is that the objectives of UK energy policy appeared to change whilst the other four levels remained consistent. This consistency has been apparent within energy policy documents, in how international

⁷⁸ Of course, by this stage, as already mentioned, the UK was already the largest investor in Russia due to energy sector investments via, among others, BP. This idea that oil and gas investors would be put off investing in Russia if they did not adopt 'better' governance practices remained key to British thinking.

events were perceived, and in decisions made and not made. The consistency of policy instruments and physical structures of governance are notable in the light of some reasonably serious challenges in the early part of the 2000s from quasi-government institutions and other political protagonists. The new carbon dioxide emissions reduction target may well have been offered as a weak compromise, to quell political opposition emanating from a ‘climate’ perspective, and it appears to have been effective, at least for a few years.

On the evidence of this chapter, it appears that the PEPP, and the particular way in which it was constructed, served not only to address new problems with old policies, but also within old structures. The particular endurance of sets of ideas about energy and governance can be put forward as an explanation for why the objectives of energy policy changed while other levels remained constant, and this will be discussed in detail in chapter seven. It might also be possible to question, given the vague wording of new objectives, the degree to which policymakers were actually expected to meet these objectives.

The strategy adopted, whether it represented an attempt to ‘buy time’ or to compromise opposition, became increasingly higher risk. By acknowledging the new problems, and by including them, no matter how vaguely, within the objectives of energy policy, the DTI and Ofgem were leaving themselves open to yet more convincing critique should they fail to meet those targets.⁷⁹ These types of critique would be harder to make were the environment, and energy poverty, not objectives of energy policy but problems for other departments, such as DEFRA, to solve. In this way the climate perspective, although it might seem to have been drowned out and effectively ‘compromised’ at this time, did leave a marker which could be returned to by critics of the PEPP at a later date.

⁷⁹ See the 2005 Climate Change Programme Review which concluded that the UK would miss their emission reduction targets (SDC 2005). The Sustainable Development Commission was, at the time, an ‘independent’ advisor to Government on sustainable development – funded by DEFRA.

Chapter 5: The Energy Weapon, Russia and the Repoliticisation of Energy 2004-7

Introduction

Following on from chapter four, this chapter bridges the gap between the consistency of pro-market ideas and narratives in the face of various challenges, which we saw in chapter four, and chapter six where the pro-market energy policy paradigm (PEPP) undergoes more profound alteration. This period from 2004 to 2007 can be characterised as one in which a security of supply crisis became widely perceived, that is in public, elite and some academic circles, but not one in which the PEPP was formally rejected. It will be argued here, however, that the security of supply crisis and the degree to which it dominated crisis debates did lead to a re-politicisation of energy, particularly in a ‘deliberative’ sense. The crisis narrative that emerged, based on geopolitical ideas about national energy dependence and vulnerability, stood in direct contrast to recent pronouncements about ‘benign’ international energy and positive energy inter-dependence in the 2003 Energy White Paper (DTI 2003).

Section one of this chapter starts with a very brief consideration of Russian energy reforms. The crisis debate which ensued in response to these changes, with its emphasis on near-term supply insecurity, unreliable foreign producers and national energy dependence, was similar in tone and scale to UK oil crises debates of the 1970s. The extent to which the geopolitical version of energy crisis came to dominate, and across society, infers the strength and legitimacy of simple arguments, based on uncertainty and fear, to both grip public imaginations and lend impetus for political action. This chapter argues that it was partly the nature of the energy crisis narrative itself, the publically perceived threat to UK national energy security and Russia’s role in it, that resulted in the emergence of a process of energy repoliticisation, particularly of a ‘deliberative’ kind, and of growing political calls for action.

Processes of ‘deliberative’ repoliticisation were also arguably leading to a ‘re-think’ of energy. Yet another Energy Review was undertaken in 2006, followed by an Energy White Paper in 2007. Policy changes contained therein reflected another reiteration of PEPP ideas about energy and its governance but also some, perhaps incongruous, geopolitical ideas and solutions. The majority of policies, domestic and international,

aimed at addressing the supply crisis can be understood, with reference to Hall, as attempts “...to stretch the terms of the existing paradigm...” (Hall 1993: 280). It will be argued that the degree to which ideas about energy governance remained dominant at this time might partly be assigned to understandings of the crisis as international or exogenous in nature, and not related to UK energy governance practices.

The way in which the PEPP evolved in response to the start of this process of ‘re-think’ was, at this time, quite mixed. The final section of the chapter will assess these responses with the ultimate conclusion that some changes to the PEPP had started to emerge particularly at the levels of ideas about energy and of objectives of policy. It should also be noted, however, that the ‘re-think’ of energy policy continued well beyond 2007.

1. The UK Security of Supply Crisis: Geopolitical Narratives Re-Emerge

If we are to proceed below with claims that Russian energy re-nationalisation acted as an indirect catalyst for change, particularly in that it encouraged a high degree of debate and discussion about energy, then we need to understand why. The below section will outline briefly, with reference largely to non-Russian, or ‘Western’, academics some of the elements of the Russian reform process which were perceived as most problematic within the UK. Part of the emerging understanding that energy was entering another period of crisis was that Russian ‘resource nationalism’, as the reforms were perceived in political circles, was understood to represent a reversal of progress towards established neoliberal energy norms on an international basis. Another important factor was that this apparent about turn was not anticipated, was surprising and perplexing in equal measure, and as such it challenged the assumptions that many in the UK had made about the success, and future direction of, international energy markets and associated energy security (cf. Interview 19). Lastly, in terms of public reactions, it should also be emphasised that oil prices escalated from an average price of \$32 per barrel, in the first quarter of 2004, to an average of \$121 per barrel in the second quarter of 2008 (BP 2008).

1.1 The Russian Federation and Energy Governance Change

A cursory glance at Russian energy policy documents, such as the 2003 Energy Strategy of Russia, shows an overt commitment to natural resources as the engine of Russian economic and political growth as well as to collective control of the extractive industry

(Ministry of Energy of the Russian Federation 2003). Energy, from this perspective, is considered to be economically and politically important and it should, as such, be controlled by the state, particularly in the light of the previous decade, see below, of disinvestment.

Beyond emerging arguments for establishing more state control over natural resources, lay a further important reason for reforming the extractive industry. It had been quite widely argued that the oligarchs, who had gained oil and gas assets largely as a result of the ‘loans for shares scandal’ in the 1990s, were neither re-investing profits back into this sector, nor paying all taxes due to the state. Some analysis has pointed to a policy of both “cash” and “asset stripping” being pursued in the extractive industry in the late 1990s and early 2000s (Boussena and Locatelli 2005: 10).⁸⁰ One of Putin’s early attempts to correct this situation was to call a meeting, in May 2000, with the oligarchs to outline three new rules: reinvestment of profits back into the Russian extractive industry, payment of taxes in full and, less relevant for arguments here but most controversially, a moratorium on oligarchs becoming involved in Russian politics (Bean 2004: 348).

When Mikhail Khodorkovsky, one of the most prominent and politically active oligarchs and CEO of Yukos, was imprisoned this came as a considerable shock to UK elites as well as to large energy corporations outside Russia (Erixon 2008: 2; cf. Interview 19). On the 25th October 2003, in the run up to the December elections Khodorkhovsky was taken, in dramatic fashion, into custody on a charge of fraud and tax evasion. A large portion of the Yukos Corporation’s stock was subsequently seized by the Russian Prosecutor General’s office to cover \$2bn of back taxes (Brill Olcott 2004: 11).⁸¹ A number of other state take-overs of private companies followed this initial seizure of Yukos assets, including the purchase by Gazprom, the 51% state-owned gas monopoly, of Sibneft, Russia’s fifth largest company (Light 2006: 20). The

⁸⁰ Lack of reinvestment was considered extremely important given the huge estimates of investment required. In 2003 the Russian Government predicted that \$230-240bn would be required in the oil industry alone between 2000 and 2020, whilst the IEA estimated requirements of \$328bn to 2030 in the same sector (Locatelli 2006: 1076).

⁸¹ Less than two months after Khodorkhovsky’s very public arrest the Putin administration won another general election with a comfortable margin. This attests arguably both to the unpopularity of oligarchs and to the popularity and degree of acceptability of relatively ‘statist’ ideas in Russia.

share of oil output produced by majority state owned companies consequently rose from 16% in 2003 to 43% in 2006, and the overall state share in the economy rose from 30% to 35% (Rutland 2006: 21).

Not only were some energy assets in a process of moving from private to state control, but future access for international oil companies (IOCs) was being restricted once more. Although some limits on foreign investment had only recently been lifted, by the Decree of 4th November 1997, major changes were made in 2003 to Production Sharing Agreement (PSA) law (Locatelli 2006: 1082). PSAs had been, and remain, the primary mechanism through which international oil companies could access Russian oil and gas assets. These changes meant, however, that only 30% of Russian oil reserves could now be developed under the PSA regime and by 2003 28% of Russian oil was already covered by a PSA (Locatelli 2006: 1082).

There were, in addition, other operational limitations placed on IOCs over these years making it harder to conduct business in the natural resource sector. Two major IOCs, Royal Dutch Shell and ExxonMobil, faced re-deployment of large development licences (Locatelli 2006; Bradshaw and Bond 2004). International companies felt that they were running up against, at best, a lack of transparency in the system of allocation of exploration and development licences by the Federal State, and by the Regions, as well as general institutional instability (Locatelli 2006: 12). It was becoming increasingly important for IOCs to have, and be able to utilise, political connections both at home and within the Kremlin (Interview 7).⁸² These changes were significant given that the UK had become the largest inward investor into Russia, given the UK official line taken about the need to reduce state interference in the process of investing, and given the DTI's mandate to support British businesses.⁸³

Although Russia had exhibited many signs by this stage of what is referred to in the West as 'resource nationalism', it had been contended among some analysts, prior to the Russo-Ukrainian gas dispute in 2006, that Russia could, and or would, not knowingly

⁸² A House of Commons report on energy security, quoted at more length below, also confirmed that "... political considerations have entered British energy companies' commercial relationships abroad..." (House of Commons 2007a: 2).

⁸³ Although the large and high profile TNK-BP PSA, formed in February 2003, had been left relatively unaffected by these events, thereby limiting direct impact on the UK's corporate interests in Russia.

do anything to negatively affect supplies to Europe (Gotz 2004: 2). Despite growing state control of energy assets, and re-regulation, the view remained widespread in Europe that Russia would remain, if not a ‘friendly’ country for investment, then at least a reliable and increasingly important supplier to Europe, as OECD supplies continued to decline. Commitments had already been made to build a new gas pipeline system, NordStream, running from Vyborg, in Northwest Russia, under the Baltic Sea to Germany where it would inter-connect with other pipelines. This would tie Europe more closely to direct supply from Russia and estimates were that Europe would, by 2030, need to import more than 75% of its total energy needs (Finon and Locatelli 2008: 428).

As such the Russo-Ukrainian gas dispute of 2006, and the deliberate three day reduction of gas throughput by Gazprom to Europe, surprised and shocked many European, and UK, observers and instigated a profound and widespread debate about energy, and its supply, security and future.⁸⁴ Gazprom, now a majority state owned company, was widely perceived in the UK, and Europe, to be acting on Kremlin instructions thus showing how energy could be utilised as a weapon. Although “...no EU country needed to interrupt supplies to customers...” (Stern 2006: 9), the psychological effect that this reminder of Russia’s ability to disrupt supply, and of Europe’s mounting gas dependence, was significant. It also served as a reminder that gas, unlike oil, was still predominantly regionally traded, often on fixed, long-term contracts.⁸⁵ Gas prices did, again, escalate at this time.

Rather later on in the time-period covered by this chapter, it also started to become clear that Russia had also had a change of heart regarding the all-important Energy Charter Treaty (ECT). Although already a signatory to the treaty, which created binding obligations covering the trade, transit and investment in energy based on liberal market

⁸⁴ To understand the extent of shock and uncertainty as this time in Europe particularly it is worth noting that up to 80% of Europe’s gas arrives through the Ukrainian pipeline system. To get a clearer picture of pipeline interconnections between Russia and Europe: <http://search.atomz.com/search/?sp-q=maps&sp-a=sp10029401&sp-p=all&sp-f=ISO-8859-1>

⁸⁵ Analyses of the Russia-Ukraine gas transit relationship suggest that it was far more complex than the story portrayed in the UK media. In addition, again in contrast to many UK reports, ‘blame’ for the dispute can be assigned as much to the Ukrainian as Russian companies involved (Stern 2006; Pirani 2007; Pirani et al 2009).

principles (Hadfield 2008: 326), Russia refused repeatedly to ratify the ECT. One of the achievements of the ECT was that, for perhaps the first time, a significant oil and gas producer was to be tied into international energy market norms. Without Russia's ratification part of the importance and utility of the treaty was voided, and Norway was to follow in refusing to ratify the treaty. To add insult to injury, attempts to apply ECT dispute settlement mechanisms during the Russia-Ukraine gas transit dispute had failed, from both sides (Pirani 2007).

It is by no means claimed here that Russia's actions alone prompted UK energy governance change but that the way in which they were perceived, coloured largely by the ideational context, did indirectly and importantly, lead to a considerable degree of energy repoliticisation. Russia's turn to the West had represented such an incredibly hopeful moment in the history of international, and energy, relations that this apparent about turn was profoundly felt. Fears about Russian resource nationalism put other international events into a new light, somewhat different from perceptions evident from policy documents in 2002 and 2003. As such, even as global hydrocarbon demand was growing, which had already been acknowledged in the 2003 White Paper (PIU 2002: 6; DTI 2003: 14, 78-79), supplies, increasingly coming from outside the OECD, became increasingly perceived as 'less reliable' or 'stable' (DTI 2006 and 2007; Victor 2006).

1.2 The 'Third Age of Energy Security'

The third age of energy security is a reference to the re-emergence of the notion that energy supplies, at affordable prices, were perceived in the West as being potentially at risk, whilst also mindful that this perception is not new (Leaver 2005: 92). This section analyses the return of geopolitically informed narratives within 'public' UK circles, i.e. the media, television, broadsheets and journals, some think-tanks as well as within academia.⁸⁶ What is noteworthy is not just the extent to which this narrative, and associated ideas, re-emerged, but that a debate about energy security started to appear in the public realm in the most loud and persistent way since the 1970s oil crises (Leaver 2005; Nuttall and Manz 2008; Jegen 2009; Friedrichs 2011). It could be argued that the public nature of the Russia energy story, and the evocative way in which it was

⁸⁶ The emphasis here on various media outlets as illustrative of the changing energy narrative recognises arguments about the role of the media as a whole in getting issues onto the political agenda (Grant 2000: 125), but also arguments that the media can often reflect popular public ideas.

narrated, helped to establish the notion that energy supplies might, indeed, be under threat and that energy was, as a result, in crisis.

There are a number of noteworthy aspects of the way in which Russian reforms were covered in the UK print and television media, not least the emergence of notions that energy is powerful and that Russia is to be feared. The Economist's 'Special Survey: Russia', of May 2004, was very much focused on Putin, energy and power.⁸⁷ One article claimed that, prior to the Yukos affair, Putin's rather more "steely grip" on power, as opposed to Yeltsin, was welcomed by Western investors who "flocked back" to this now more stable, resource rich economy (Economist 2004b: 3; cf. House of Commons 2002: 80). However, post the arrest of Khodorkhovsky, and the seizure of Yukos assets, it was clear that preference for a stable Russia was being replaced with fears about Putin's power and autocratic status (Economist 2004b: 3 and 5).

This question of Russia and power was closely linked in media coverage to state control over large energy assets. None of the articles read for this thesis claim anything but energy as a source of potential international influence for Russia (see in particular: Robinson 2006; Simpson 2006; Wagstyl 2006; Ostrovsky 2006; Kendall 2007; Hotton 2007; Powell 2008).⁸⁸ Russia was understood to be "...flexing its well-oiled muscles..." (Robinson 2006) and in possession of a "...natural resources bonanza..." (Powell 2008: 44-5). Russia was roundly condemned for the arrest of Khodorkhovsky, for seizing assets from Western companies, and for bullying them, but sometimes also with the inference that Russia would suffer as Western investors would, as a result, withdraw investments (The Times 2006).

A number of articles directly claimed that being a major energy provider brings global influence, and that Russia was fast becoming an 'energy superpower' (Wagstyl 2006: 3; Simpson 2006; Kendall 2007: 23; Hotton 2007; Ostrovsky 2006). Not only, therefore, was Russia capable of wielding power, but it was also suggested that it was very much willing to do so, not least in reference to Putin's assertion that Russia was, once again, a

⁸⁷ There were number of 'special' reports and surveys on Russia, and energy, over this time period. See also the Financial Times' Special Report: Russia of April 21st 2006 and the New Statesman's special on Energy of July 2007.

⁸⁸ This suggests the re-emergence of a different understanding of energy in that it is no longer replaceable and of low intrinsic value.

“super derzhava” (superpower) (Robinson 2006).⁸⁹ This narrative intensified significantly after the Russia-Ukraine gas transit dispute. Media reports claimed that Russia had “...turned off the taps...” (Robinson 2006) in open display that it was not only capable of using energy to gain influence, but also to exploit energy as a “weapon” to threaten the West (Wagstyl 2006: 3; Ostrovsky 2006: 5; Rodgers 2007: 5). Geopolitical notions of control over energy assets allowing for more political and economic power were reflected in articles such as that on ‘Who controls the tap?’ (Rodgers 2007). It seemed, perhaps from this perspective, somewhat inevitable that

Europe woke up to the new power of Russia when Gazprom turned off the gas taps to the Ukraine and Moldova (Robinson 2006)

Europe was, in this way, also reminded of its hydrocarbon ‘dependency’ status (Ostrovsky 2006; Simpson 2006; Rodgers 2007: 5).

What springs to mind when looking back over this coverage of Russia and energy is the question of whether perceptions of a security of supply crisis might not have emerged if the country restructuring its energy sector had not been Russia. This is a question to which we will return, here below. What is also striking, and perhaps related, is the degree to which these stories found popular purchase. One BBC television programme, ‘Have I Got News for You’, still includes in the opening titles a depiction of lights going out all over Europe as a Russian soldier turns a gas pipe off, with steely grin on his face.⁹⁰ Another cartoon style depiction of Russia, energy and threat can be seen on the front cover of *The Economist* featuring a picture of Putin, dressed in Italian mafia style, wielding a petrol pump as a gun (Economist 2006) under the title ‘Don’t Mess with Russia’. The cartoon, from an article in ‘The World Today’, represented here below is a useful illustration of these kinds of ideas – linking Russia, power and energy together (Sherr 2009).

⁸⁹ The 2003 ‘Energy Strategy of Russia up to 2020’ also suggested that Russia was willing to use natural resources as an engine for economic and political recovery (Ministry of Energy of the Russian Federation 2003). Such a role for natural resources was seen as positive in that it would enable recovery, very different from Western perceptions.

⁹⁰ See:

http://www.bbc.co.uk/iplayer/episode/b00wbw6y/Have_I_Got_News_for_You_Series_40_Episode_7/

RGY
ME, CHATHAM HOUSE

e
:
its
n
lers
of
st.
?
to
s



As seen in the last chapter, the UK had anticipated its move to importer of oil and gas in a relatively sanguine manner. This picture was about to change significantly. Such energy coverage, suggesting insecurity of supply, was leading to more questions, about where supplies would come from, what UK capacities were (Leake 2005; CBI 2006), and of the potential hole in the Treasury's budget (Porter 2005). Phrases such as "...reliance on dubious regimes..." start to enter the debate (Leake 2005). Energy's socio-economic role starts to take on an alternative tone with references to energy as "...the lifeblood of a modern economy" (CBI 2006: 1).

There were, however, a few dissenters in the pack. Some argued, informed by the economic notion of the 'Resource Curse', that Russia's over reliance on natural resources, to the detriment of a diversified economy, would ultimately result in a reversal once more of its economic and political fortunes (Shevtsova 2008: 34). Others that Russia would not be in a position to be able to develop its natural resources sufficiently in future based on the idea that state interference in the economy always leads to sub-optimal results (Ostrovsky 2006: 5).

Away from journals, newspapers and popular media, UK think tanks were starting to produce analysis informed by a quite geopolitical take on events. In 2007 a politically prominent and influential UK think tank, the Institute for Public Policy Reform (IPPR), produced a report on the UK's *national* energy security. Likewise, the IPPR's report acknowledged mounting fears about UK "...import dependency..." and about future "...supply disruption". It did also pick up on a perceived trend of emerging political importance for energy based in particular on Russian actions (Bird 2007: 13). The Foreign Policy Centre produced a piece on the 'Russian Energy Empire' in September 2004, which focused on Russia's new role as an 'energy superpower'. This report suggested that Russia increasingly has the potential to achieve the economic and cultural predominance in Eurasia that the United States has in the Americas, with implications for access to Caspian Basin oil and gas reserves (Hill 2004: 57-8).

In terms of academic circles and analysis of energy, security and Russia, what is most noticeable was the increase not just in terms of volume of work, but in analysis undertaken from alternative perspectives. In chapter one, it was observed that academic energy analysis had been dominated in the UK by neoliberal economics and by technical analysis (CEPMLP 2006). 2006 served as a real turning point in that articles

about ‘energy security’, from a geopolitical perspective, started to become the norm once more, and according to some, to dominate analysis (Goldthau and Witte 2009). A new journal was launched in 2008 entitled the ‘Journal of Energy Security’, which was intended to fill the perceived gap in energy research, but also to provide an outlet for all the new energy security research that was starting to emerge.⁹¹

Much of this research has been referenced in chapter one, section two, but as a reminder of how energy in crisis was being explained from a geopolitical perspective we can turn to Paul Roberts:

Energy has become the currency of political and economic power, the determinant of the hierarchy of nations, a new marker, even, for success and material advancement. Access to energy has thus emerged as the over-riding imperative of the twenty-first century (Roberts 2004: 6; see also Klare 2008)

Within such a new depiction of the world, and energy’s role in it, countries heavily reliant on imports will increasingly be at risk from competitive practices, from the influence of exporters and prone to conflict (Klare 2008).

It was around this time also that some academics, and other groups supporting change, started to re-visit arguments about ‘peak oil’. It has been argued that the peak oil debates, which had been prevalent previously in the 1970s, had not found public, or political, traction until renewed energy security fears erupted in this time period (Friedrichs 2010). The re-emergence of this debate, however, served to throw further fuel on the fire of, sometimes quite popular, fears about being able to access sufficient energy supplies in future (Heinberg 2003; Simmons 2005; Leggett 2005; Kunstler 2005; Klare 2008). Peak-oil arguments can be applied in conjunction with zero-sum game assumptions about global energy to instigate debates about who has access to hydrocarbons and who does not (Reihing 2007; Clarke 2007; Klare 2008).

What is also particularly noticeable about academic analysis of energy at this time is the emergence of the notion of ‘politicisation’. Again, as with paradigm and paradigm shift, the term is often used without any explanation of what it means, let alone formal definition. However, some were claiming that Russian energy actions were responsible for “repoliticising” energy in Europe (Jegen 2009: 18). Examples of this argument are

⁹¹ See: <http://www.ensec.org/>.

the suggestion that Russia played a role in putting energy security at the top of political agendas, both in terms of their behaviour and in terms of the way in which they designed the agenda for the St Petersburg G8 Summit of 2006 (Offerdahl 2007; Nuttall and Manz 2008). Other prominent UK analysts, and government advisors, have also argued that the notion of ‘energy security’ only really gained political legitimacy again from 2006 onwards (Interviews 14, 15 and 16).

At this point we can return to the argument, above, that the narrative of a security of supply crisis was successful precisely because it was Russia in particular, the old arch enemy, which was renationalising its energy assets. By contrast the return of Venezuela to OPEC and the renationalisation of Petroleos de Venezuela S.A. (PdVSA) had not evoked such responses. The narrative of ‘fear’ and of Russia as threatening contained within it vital elements of credibility and legitimacy drawing as it did upon deeply embedded Cold War perspectives. It became commonplace to start an article, or paper, on energy and Russia by referring to the past. For example an article in the Economist started by suggesting that “...Russia-watchers had looked on in elation as communism crumbled and the Soviet Union collapsed...”, and then contrasting this position of elation with Russia’s re-emergence as potentially threatening (Economist 2004a: 11). There were references back to the Soviet Union as the “evil empire” (Robinson 2006), and to the understanding that “...(t)he Cold War was supposed to be history...” (Powell 2008: 44). One new book, written by a journalist from the Economist, was entitled ‘The New Cold War: How the Kremlin Menaces Both Russia and the West’ (Lucas 2009).

This mentality was easy to mine using such terminology in that it had long-standing antecedents – Russia had long been perceived at best as somewhat incomprehensible (Browning 2008), as representing a completely different, read lower, set of morals and values (Kennedy-Pipe 1998), and as evil and threatening (Robinson 2006). Chapter two had suggested that crisis narratives, if they are to find purchase, need to be simple and to have a degree of popular appeal, as well as an equal measure of credibility. Arguably the notion that energy supplies might be threatened was entirely credible for UK audiences given the high degree of existing inter-subjective meaning and the long history of believing that Russia, and oil, can pose a threat. This narrative is, furthermore, predominantly about Russia doing something ‘wrong’ but not necessarily about offering credible solutions to this problem.

2. Geopolitical Narratives in 'Elite' Political Circles

This observation brings us on to the way in which debates and narratives within political circles, particularly within parliament and amongst policymakers, started to shift. As with the bulk of the popular narrative at this time, the emphasis from the pro-market perspective was very much on the actions of others and not directed at the PEPP. As time elapsed the narrative became increasingly focused on the question of future supplies and the extent to which they would prove problematic given the growing degree of political intervention. In chapter four we saw that the official definition of energy security current to this emerging crisis debate was "...reliable supplies at affordable prices..." (DTI 2003), but as argued above what was happening in Russia, from the pro-market perspective, would theoretically serve to challenge both the reliability and affordability of future supplies.

2.1 UK Elite Narratives

A plethora of new papers, debates and policy documents on energy emerged over this time, despite the round of energy reviews and the new White Paper that had already been produced immediately prior to this period (see in particular Havard 2004; Ofgem 2004; DTI 2005a, 2005b, 2006a, 2006b and 2006c; JESS 2006). What was also evident over this time, however, was the rising amount of reports produced by political institutions outside of those directly responsible for policymaking, the DTI and Ofgem. The Foreign Office, House of Commons committees and parliamentary offices, such as that of Science and Technology, all started to produce reports on energy, and energy security (FCO 2004; POST 2004; Fox 2006; House of Lords 2006; House of Commons 2007; FAC 2007).

The energy sector became increasingly referenced in policy and other government documents in terms of potential supply insecurity not because sufficient supplies were not understood to exist, but because they were increasingly coming from countries with a high potential risk of internal instability (FCO 2004; Straw in Plesch et al 2004). Specifically, also, there was now a focus on political arrangements in that it was suggested that international frameworks, particularly in Russia, may not allow new reserves to be developed properly (Havard 2004; FCO 2004). This trend of fossil fuel production increasingly taking place outside the OECD had been overtly noted in the 2003 White Paper but it was then more of a passing comment. But by 2007 energy was

understood as becoming internationally more ‘politicised’ with potentially negative implications for energy prices (Straw in Plesch et al 2004; DTI 2007: 19). These comments imply more than a nod in the direction of geopolitical ideas of a zero-sum-game in energy trade and of negative energy dependencies over positive economic interdependence.

There was particular emphasis, also, on the UK switch from exporter to importer of hydrocarbons within this new international context (POST 2004; DTI 2006c and 2007; House of Commons 2007). Language of self-sufficiency, risk, socio-economic reliance on energy and growing dependencies starts to emerge (POST 2004: 1; see also DTI 2006c and 2007). The DTI White Paper of 2007 points out that

...with the UK increasingly reliant on imported energy, we need to manage the risks arising from the concentration of fossil fuel reserves in fewer and further away places, some of them in less stable parts of the world. (DTI 2007: 7)

The emphasis, as will be argued in more detail below, in terms of what UK energy policy should be set to achieving alters with the return of supply concerns and the re-emphasis on the importance of energy, and getting it right.

Echoing media, academic and think-tank narratives, direct links can be found between fears of supply insecurity and Russia (FAC 2008; see also House of Commons 2007; Ofgem 2009: 1). In particular, in 2007 the Foreign Affairs Committee (FAC) produced a report entitled ‘Global Security: Russia’ (FAC 2008). In this report the various ways in which Russia represented a global threat, including through threats to energy security, are outlined and various policies recommended. It broadly concludes that

...the Government... continue to encourage its EU partners to take a robust and united approach to dealing with Moscow, in the energy field and beyond (FAC 2008: 14)

Much can be taken from this document, not least the growing emphasis in political circles on the risks Russia represented to energy security, and the, arguably related, growing involvement of the FCO in analysis of Russia and energy, but also in diplomacy with Russia.⁹² Increased FCO involvement might also be an expected follow on to perceptions that energy security should be considered at a national level (see Helm 2005). What can also be understood from this document is the ways in which the pro-market paradigm, and its institutionalisation over time in the UK, caused the UK to interpret Russian actions so negatively.

⁹² It was around this time, in 2006, that the ‘UK-Russia Energy Dialogue’ was established.

This new awareness of political risks, of Russia and its relationship to the energy sector is also evident in the House of Commons 2007 research paper on energy security and in Liam Fox, Shadow Defence Secretary's, paper 'Over a Barrel: the Challenge of Defence and Energy Security' (Fox 2006; House of Commons 2007a). Growing political interest in and attempts to research and understand energy better, outside of the DTI and Ofgem, indicates the extent to which energy was subject, once more, to political debate, deliberation but also, potentially, challenge. These reports take a stronger tone on Russia, and energy, than the more qualified language used in the policy documents referenced above. For example, by directly referring to Russian control of energy resources being used as a tool of foreign policy to further their own strategic interests (House of Commons 2007a: Summary). The House of Commons report also suggested that "...energy policy is inextricably linked to the availability of resources..." and goes on to refer at length to arguments about peak oil (House of Commons 2007a: Summary). Liam Fox's report takes the narrative one step further by referring directly to "resource nationalism" in Russia, to Russia's lack of "natural warmth" toward the West, and to the need to spend on defence in order to protect supplies (Fox 2006).

As evidence of, and perhaps in response to, this renewed political interest energy security is added, by the UK, to formal forums for international negotiation. In 2005, during the October EU Summit at Hampton Court, the issue of 'energy security' was added to the agenda (Offerdahl 2007). In his paper prepared for the conference, the ubiquitous Helm, characterised energy as a sector which was by then becoming an issue of national security (Helm 2005b: 2). Helm's paper specifically refers to an increasing dependence on Russia for supplies of, particularly gas, as a source of threat to the security of EU, and by extension UK, energy supply. Likewise, energy security was top of the agenda in the G8 Summit of 2006 (G8 2006). In 2006 Tony Blair used his annual Lord Mayor's speech to highlight energy security concerns (DTI 2006c: 4). All of this indicates a high degree of 'deliberative' repoliticisation.

It could be argued that the way in which Russia's energy restructuring, and associated actions, were perceived has an element of Ole Wæver's 'societal security' about it (Wæver 1995: 67). This is because the UK officially considered energy security to be contingent upon further liberalisation, competition and good governance in energy – therefore Russia's about turn away from this path constituted a threat to this end goal,

potentially causing the UK not to be able to live “as itself” (Wæver 1995: 67 in Williams 2003: 519). This is another instance where we can see the relationship between material events and ideational interpretations.

As Matthew Watson has argued with regard to specific neoliberal interpretations of globalisation driving particular policy changes in Britain (Watson 1999), so too have pro-market interpretations of Russian actions driven the emergence of a national energy security narrative, and some associated responses. Arguably, therefore, and perhaps somewhat contradictorily, the mounting credibility of the geopolitical perspective can be closely related to the dominance of neoliberal ideas about how energy should be governed.⁹³ It is, perhaps, for this reason that some of the other geopolitical arguments, referenced in chapter one, which imply a critique of existing governance arrangements and assumptions about what markets can achieve, were not so much reflected in the elite political debate.

2.2 The European Energy Debate

The UK energy debate was both part of, and impacted by, the European energy crisis debate. The EU had, by the mid 2000s, finally been able to reach some agreement about energy market deregulation and the importance of competition, and had, as seen in chapter four, very recently liberalised gas markets.⁹⁴ The UK had considered itself as having been influential within the EU on energy matters, and specifically successful in encouraging EU gas market reform (Davies 1996; DTI 1998; DTI 2003: 10; FCO et al 2004). In addition, UK policy documents had repeatedly emphasised the importance of multilateral, as opposed to bi-lateral, negotiating channels, particularly via the EU, in pursuing its objective of expanding liberal, transparent market rules globally (DTI 2003; FCO et al 2004; FAC 2008).

The EU, however, being an amalgamation of a large number of countries, had long included a range of different ideas about energy, governance and international relations. Some countries, such as Germany, conducted a much more direct energy relationship with Russia than, say, the UK. The EU as a whole was expected to import rapidly increasing quantities of gas, and oil, directly from Russia often, most of which would be

⁹³ This analysis will be extended in chapter seven, section two.

⁹⁴ Energy had been one of the sectors specifically excluded when the ‘internal market’ was set up in 1992 (EC 2011: editorial).

traded on long-term contracts (Correlje and van der Linde 2006). Ex-Soviet states such as the Ukraine, Lithuania and Belarus imported almost all their hydrocarbon needs from Russia as a result of long-standing political and infrastructure arrangements (Raszewski 2012 forthcoming). Many of them continued to receive large discounts on their gas, which lay at the core of worsening energy relationships between ex-Soviet Europe and Russia.

European fears about Russia's energy policy were overtly palpable at the time Russia began the process of restructuring and re-regulating its energy sector, but they were magnified intensely in the period immediately after the Russo-Ukrainian gas dispute (Light 2006: 20). Clearly supplies of gas, vital to electricity production, to the most directly dependent states might have been severely impacted by the dispute, particularly as a number of these states had little or no storage of reserves (Stevens 2009). What ensued was an escalation of geopolitical argument, debate and posturing between the EU and Russia.⁹⁵ In response the EU tried, again, to develop an 'Energy Policy for Europe' (McGowan 2008: 91), so that Europe could speak, on energy, "...with a single voice on the international stage..." (EC 2007; see also Bromley 2008: 6; Umbach 2010: 1234).

The EU began to claim that they would act to reduce further dependence on Russian gas, and pipeline systems, by developing and investing directly in Caspian Basin energy and transport routes, such as the controversial Nabucco pipeline system (Hadfield 2008: 328; Monaghan 2009: 16). Russia responded with claims about expanding their exports to the increasingly energy hungry Asian, read Chinese and Indian, markets (Boussena and Locatelli 2005: 21-22; Sevastyanov 2007: 4).⁹⁶ Russia continued to extend its influence through the Caspian and Central Asian energy sectors, however, via state owned energy companies thereby diverting much Caspian gas and oil via Russian transport networks (Boussena and Locatelli 2005: 14). Direct EU-Russia energy relations had been further complicated in that although the EU, like the UK, had been

⁹⁵ The Turku Energy Conference, of November 2008, included senior EU energy officials as well as leading Russian energy academics. The tone of outright hostility was palpable as these two groups exchanged views. Clear, also, was the extent to which their views on energy governance differed.

⁹⁶ It was also around this time, 2007, that Russian submarines planted a Russian flag at the bottom of the Arctic Ocean to claim a large portion of the world's biggest continental shelf wherein an estimated 25% of potential global oil and gas reserves lie (Umbach 2010: 1229).

pursuing market opening in Russia, many of its own member states were in breach of EC Energy directives in maintaining near monopolistic control over national gas and electricity companies (Hadfield 2007: 23).

Moreover, however, the differing perceptions of Russia and energy within Europe, often based on historical relations and dependencies, fed into already existent internal EU disagreement about energy (Barych 2007: 1; see also Belyi 2006; Youngs 2009). This, in turn, resulted in varied support for the EU's emerging plans to act as one large, importing bloc to counter perceived Russian energy power and threats (EC 2006). As such it has been argued that

The energy policies of EU member states are not yet consolidated enough to represent a 'collective interest' of the EU and therefore have not been endogenously activated and deployed as a central foreign policy feature of the EU (Hadfield 2007: 9).

As with the UK, the sheer scale of the emerging energy security debate prompted growing political interest in Europe such that it was considered to be at the top of the EU political agenda (Barton et al 2004; McGowan 2008; Jegen 2009; Natorski and Surralles 2010). Francis McGowan suggests that although the EU energy initiative has been

...equally concerned with 'climate change' as another major, possibly existential, challenge for energy policy, ...it is 'energy security' that has given the policy debate a particular immediacy and profile... (McGowan 2008: 91)

In her article on potential paradigm shift in EU energy security policy, Maya Jegen, quotes Andris Pielbalgs, the then EU Energy Commissioner, as joking that the best thing that happened to him in his job was Gazprom's restriction of gas deliveries to the Ukraine. This was because it brought to mind the vulnerability of energy supply and infrastructure, thus forcing political attention onto this area (Jegen 2009: 1).

2.3 Public and Political Debate and 'Re-thinking' Energy

The escalation of the energy security debate within the UK, and Europe, arguably revealed the extent to which the UK lacked dedicated energy analysis and policymaking capacities. Much as it has been suggested that the repoliticisation of energy in Europe led to new impetus for reforms to energy policies (Jegen 2009: 18), so too was a process of repoliticisation taking place in the UK, in a 'deliberative' as well as 'technocratic' sense.

In July 2004, in the immediate aftermath of the Yukos affair, the new Energy Act had conferred on the Secretary of State for Trade and Industry a fixed duty to report annually on energy security matters to Parliament (DTI 2005a). Thus a specific political process was put in place to revisit energy security at least annually, which implied that the DTI's Energy Directorate needed to have the capacity to do so. The research paper produced for the House of Commons in 2007, referenced above, is another clear example of an attempt being made to understand better the international dynamics of energy (House of Commons 2007a). Certainly some policymakers and analysts were noticing an escalation in direct political pressure to respond in some way to newly perceived threats. This was not well received in that it was seen as direct political interference in economics (Interviews 2 and 15).

Clearly, however, the DTI and Ofgem did feel compelled to respond as can be inferred from the production of yet another round of energy reviews and the new White Paper, just a few years after the last round. Changes also started to take place within the DTI and FCO at this time as new resources were allocated to energy analysis. There emerged an ongoing joke within the DTI about a new project initiated in 2006/2007 called 'The Project Pool' which was designed to make staff more flexible within the Department. The joke was that instead of flexibility it resulted, ultimately, in most available staff being moved into the energy division (Interview 5).

The 2007 White Paper also acknowledges that energy had not up until the mid 2000s existed as a discrete area of foreign policy. Again, as such, it had less dedicated capacity assigned to it. The paper announced that, for the first time, the UK has

...an integrated international energy strategy which describes the action we are taking to help deliver secure energy supplies and tackle climate change. (DTI 2007: 8)

Together the overview, above, of the geopolitical way in which energy had come to be perceived in public, European and elite circles suggests a reversion to perhaps more traditional ways of thinking. Thus in a time of shock, uncertainty and frustration it seems that the instinctive reaction was to return to ideas that had had major historical credibility. As we have seen in chapter one, these ideas had been discussed within some circles but they had not dominated either elite political circles nor had they been widespread within the media and public immediately prior to the mid 2000s.

Whilst by no means suggestive of a profound change to the level of physical structures of governance, all of this does imply at least a small degree of reversal in ‘technocratic’ depoliticisation. It also suggests, as will be discussed in more detail in chapter seven, that the degree to which energy was understood to be problematic once more would require political responses in the form of the ability to deliberate and deal with these problems.

This is what this thesis will call a political ‘re-think’ of energy, a process which will emerge as important to the willingness of government to make further changes, and which will be assessed in more detail in chapters six and seven. This is because, as it transpired, the more capacity that was given over to deliberating energy, the more it became clear that anomalies existed between objectives and outcomes of policy, and that further political commitment would need to be made to address these anomalies. The process of ‘re-thinking’ energy and its governance is also understood to be important to understanding *how* profound governance change can unfold over time.

3. UK Energy Governance: Change

It was suggested in chapters two and three that previous eras of perceived energy crisis had resulted in a varying degree of policy, and structural, change, if not paradigm shift. The narrative of UK policy documents had started to alter somewhat and to reflect some of the geopolitical ideas about energy which had come to dominate the public crisis narrative. Largely the terminology used in DTI and FCO papers is less sensational than within the print and television media, but unreliable foreign suppliers and the desire to avoid ‘dependency’ marked the mid 2000s papers and reports out from their predecessors. This is unsurprising given that it was widely claimed that both the 2006 Energy Review and 2007 White Paper were researched and compiled specifically because the DTI and Ofgem understood the political need to respond to the crisis (CEPMLP 2006; House of Commons 2007a).

This section argues that, concurrent with the degree to which energy was re-entering elite political debates at both the national and international levels, there were a number of policy alterations made relating to changing interpretations of energy and international markets. As will be seen below although most levels of the PEPP remained largely in place there were also new policies announced which affected the

PEPP levels of objectives and instruments of policy. Ideas about energy had arguably already been challenged as part of the return of the geopolitical energy debate, with its greater emphasis on energy's role in, and value to, society. What ensued, therefore, was a more mixed approach whereby various institutions of state took a more direct interest, some more geopolitically informed policies were pursued, whilst 'markets' and 'competition' remained fundamental to energy policy and to many of the solutions offered.

3.1 Re-focus Objectives: Security and Climate Change

It appeared at this time that the objectives of energy policy were again showing signs of alteration. It could be argued that energy security had, in 2003, been assumed to exist, especially given the degree to which energy governance was still understood to be heading in a pro-market direction (Thomas 2006: 583; Jegen 2009: 1; Lesage et al 2010: 6; EC 2011: 14). Energy security, although still an objective, had been an assumed outcome. For example the energy supply objective is worded such that the UK should continue to "maintain the reliability of... supplies" (DTI 2003: 11). By contrast, however, by 2007 energy security is understood to be something that needs to be established and to require further political action to achieve (DTI 2006c: 4). Energy security is now understood to be one of the 'immense' challenges facing the UK as a nation (DTI 2006c: introduction).

This puts a different complexion on the objectives of policy in that security has moved to the top of the hierarchy of energy objectives. Peter Hall, in emphasising the role of new objectives in policy change, also suggested that the hierarchy of goals was important in understanding change (Hall 1993). There had already been suggestions that energy policy was, as of the early 2000s, over committed in terms of objectives and that there might be 'trade offs' between them. The return of security to the top of the agenda arguably had implications for which objectives might be given up in the case of a trade off situation, and which would win out. What needs to be remembered at this point is the relationship, suggested above, between public interest in energy, security and prices, and political interest. The close relationship between the three implies that 'reliability' of supply might trump other commitments, except perhaps climate change (Interview 16).

Energy objectives changed in 2007 in another way also, and the combination of these two changes would bring significant pressure to bear on energy policymakers. Tony Blair, at the 2007 EU Summit, committed the UK to a set of targets, referred to as the '20-20-20' targets (Mitchell 2008: 131). Renewable energy even by 2009 remained under-invested in the UK, but specifically in transport where only 2.6% of energy came from renewable sources, and in heating, where the UK was still generating "very low levels" from renewables (DECC 2009b: 8). In order to meet the, by 2009 already reduced, renewable target of 15% of overall energy consumed, the UK would have to engineer a situation within which electricity generation from renewables would reach 30% by 2020 (DECC 2009b: 8).⁹⁷ The pressure was now starting to mount on energy policy to deliver on climate and security objectives.

It has been suggested that the EU climate targets, which incidentally were not reflected in the May 2007 White Paper, were initially agreed to without much discussion with the DTI and reportedly without the Energy Directorate's buy-in (Interview 5; Interview 13). The argument went that Blair had attended the EU meetings with representatives from DEFRA, not the energy division of the DTI. This might be interpreted as a case of change being forced on the DTI's energy division, and their energy policymaking practices to facilitate renewable energy, from 'the top'. Whilst this explanation might appear credible with regard to Blair's tendencies for 'top down' interference in Departments,⁹⁸ it is less credible with regard to the Prime Minister's intentions regarding specific renewable energy policy. This is because it was widely rumoured that Prime Minister Blair may not have understood that new climate targets would imply much policy change. Specifically, at the time, many believed that he had understood the 20% renewables targets to refer only to the electricity sector, rather than across all sectors of the economy including transport, thereby implying little change to existing policy to meet targets.

⁹⁷ The UK's renewable target had to be reduced to 15% before the EU 20-20-20 targets became binding early in 2009.

⁹⁸ In an interview with a former senior policy advisor to 10 Downing Street it was suggested that Tony Blair was partial to 'top down' governance. It was also suggested that because David Miliband, a key Blair ally, was at DEFRA at the time this might have been why that Department had more influence (Interview 20).

It is difficult to prove empirically the extent to which Blair had intended to force the Energy Directorate of the DTI to change, just as it is hard to prove whether or not renewable energy targets were adopted largely, or partly, in response to popular desires to remain reasonably ‘self-sufficient’ in energy. It has been suggested, however, that this had been the case in other countries, with more advanced renewable energy sectors, in response to the 1970s crises (Giddens 2009). It might be sheer coincidence that firmer commitments to carbon dioxide emission reduction and renewable energy targets came about at the time of widespread perceptions of energy supply crisis. Again, this argument will be taken up in more detail in chapter six.

3.2 Planning the UK Fuel Mix and Indigenous Supplies

By the time of the publication of the 2007 White Paper research undertaken within the DTI, and other associated bodies, started to acknowledge more openly a striking degree of underinvestment in energy systems within the UK, particularly in electricity and gas storage capacity (CBI 2006; DTI 2007). In order to address underinvestment, and in direct contrast to opinions expressed in the 2003 White Paper about state involvement (DTI 2003: 11 and 87), the 2007 White Paper displays a greater pre-occupation with making active decisions about the UK’s energy mix. In particular with decisions which would facilitate a greater ability to produce energy from UK sources, thereby also lowering the expected trajectory of dependence on imports. Alistair Darling was quoted at this time as saying that

...if we do nothing else, we will need to import substantial quantities of oil and gas from different parts of the world, and some of those parts of the world have obvious political difficulties (Darling quoted in The New Statesman 2007: 210).

These policies can be seen as Government not ‘doing nothing else’.

The Paper includes long sections on what might need to be done to facilitate production of domestic energy sources such as nuclear, coal and renewables, primarily in the form of wind.⁹⁹ What is evident is growing political support for supplies indigenous to the UK, which had been de-emphasised previously (Kemp and Stephens 2007: 189). The official line was to maximise “...economic production from our domestic fossil fuel reserves...” and this applied both to North Sea oil and gas, and coal production (DTI

⁹⁹ This is reminiscent of the mid 1970s when nuclear energy received a boost in response to the first ‘oil shock, as well as domestic production of oil and gas from the North Sea.

2007: 20). These domestic industries would be ‘maximised’ using the government’s regulatory powers if necessary (Bird 2007: 17).

In line with this emphasis was being placed once more on facilitating the production of domestic nuclear and coal on the grounds of ‘diversity’ (DTI 2006c). This is an about turn from the position taken in the 2003 White Paper, see chapter four, where both coal and nuclear were effectively “...put on hold...” (DTI 2003; see also Mitchell 2008). The 2007 White Paper whilst recognizing that “...imports are not in themselves a threat to the security of supply... higher levels of import dependency will bring associated risks...”, including disruption of supplies (DTI 2007: 107).

Coal-fired electricity emerges as making “...an important contribution...” to the UK’s energy security (DTI 2006c: 85). The emphasis changed from a position whereby coal would be phased out over time, to one where it could continue to be an important part of the energy mix. This position would have to be made more acceptable, given climate targets, by managing the ‘environmental impact’ effectively. Hence the emerging focus in policy documents on developing Carbon Capture and Storage (CCS) in order to bring emissions from coal, and gas, down and the establishment of the ‘Carbon Abatement Technology’ demonstration programme (DTI 2006c: 107 and 112; see also Bird 2007: 17).¹⁰⁰ A new Coal Forum was to be initiated in order to bring together stakeholders within the industry and “...to secure the long-term contribution of coal-fired power generation...” (DTI 2006c: 85; DTI 2007: 112).

Alistair Darling, then Secretary of State for Trade and Industry, refers to the nuclear option at this time thus:

(o)ur analysis suggests that, alongside other low carbon generating options, a new generation of nuclear power stations could make a contribution to reducing carbon emissions and reducing our reliance on imported energy (House of Commons 2007a: 3).

Nuclear was emerging, once again, as a politically acceptable option not just because of its ‘low carbon’ credentials, but arguably more importantly, because fears about energy security could now justify this otherwise unpopular and expensive choice. The 2006 Energy Review suggested that regulatory barriers to the construction of nuclear plants

¹⁰⁰ It is worth noting that even the strongest supporters of CCS considered it to be many years away from viability (Economist 2008: 38).

should be reviewed and that a new framework should be established (DTI 2006c: 113). It was also suggested that there might be some extensions to the scheduled lives of existing nuclear power plants, in recognition that new nuclear builds are a vast expense (DTI 2006c: 116). Renewed interest in facilitating nuclear and coal is reminiscent of arguments outlined in chapter two that securitising a subject can allow for policy choices outside ‘normal’ Government decisions.

What is also notable from the growing emphasis on the role of nuclear and coal is the relative reduction in emphasis on gas as ‘the transition fuel’. Gas-fired electricity under the PEPP would be the clear choice given its relatively low cost of production, and it is, in addition, lower carbon than coal production. Perhaps the primary outcome of Russia’s dispute with the Ukraine had been to cause countries, including the UK, to re-think the degree to which they would become, in future, dependent on gas for electricity production. The desire to avoid a future wherein ‘imports’ could make up 80% of the UK’s gas demand is clear in the 2007 White Paper and is the reason for supporting ‘diversity’, from domestic sources of energy (DTI 2007: 106).

Given, however, that fossil fuels would continue to provide for the bulk of UK energy demand substantial new contracts were at the same time being signed for supplies of gas with countries considered as more ‘reliable’ than Russia, i.e. Qatar and Norway (DTI 2005a: 2). The Government had begun lobbying Oslo in May 2007 for a new pipeline to bring another 20 billion cubic metres to mainland UK by 2012. It was understood that increased Norwegian and Qatari supplies would give “...British politicians and diplomats room to manoeuvre the next time the Russian bear roars...” (Rodgers 2007: 8). Clearly these supply relationships inferred a high degree of direct state contact between the UK and Norway, and Qatar, not entirely in line with the idea that ‘markets’ should decide on where energy comes from.

3.3 Protectionist Practices

Perceived uncertainties associated with importing from ‘unstable’ energy producers, and the associated desire to avoid ‘import dependency’ were soon augmented by a growing sense of vulnerability associated with non-EU, particularly Russian, companies’ interest in purchasing UK energy providers. The House of Commons energy security paper summarises well the growing sense of vulnerability, present at the highest levels:

*... liberalisation in Europe has made companies potentially vulnerable to cross-border mergers and takeovers from outside the EU, and this development seems to have taken Europe by surprise. In the UK there was much speculation in 2006 that Centrica, Britain's largest energy supplier, could be bought by Gazprom, the Russian state gas company; and UK Coal has been the target of interest by the Russian minerals group, Kuzbassrazrezugol (House of Commons 2007a: 1-2).*¹⁰¹

It is worth highlighting the association implied in this extract between liberalisation and vulnerability which, albeit fleeting, can be seen as political acknowledgement of endogenous reasons for crisis.

Although theoretically, within the confines of the PEPP, questions of who owns energy companies and who provides supplies would be for markets to decide upon, political decisions made around the time contradict this idea. It was widely rumoured in the UK, and Russian, press in 2006 that Gazprom was interested in purchasing the UK's premier integrated energy company, Centrica. What was most remarkable was the reported response of the UK Government. In 2006 the Financial Times ran an article which indicated that Gazprom had been informed, in no uncertain terms, that if they went ahead with their bid for Centrica then UK legislation would be altered to prevent its success (Eaglesham 2006; see also Putin in BBC 2006).¹⁰² Likewise in March 2007 the Observer ran an article claiming that the Foreign Office had advised Centrica Energy not to buy gas from Iran, a move which, in an ironic reversal of positions, the Russians overtly regarded as politics meddling in the private, energy sector (House of Commons 2007a: 2). The degree to which such political actions were 'rumoured' rather than overtly stated in policy documents, or Parliament, is evocative of the notion of 'secretised' depoliticisation in energy policy.

Lastly, in response to increased fears about Russia's growing ability to impact, negatively, on energy markets the UK actively supported the EU's policy of

¹⁰¹ Interviews conducted have confirmed that ideas about the need to protect UK assets from Russian purchases had emerged at the highest levels. These ideas, again, were not new in the West – see successful attempts to protect US energy assets from Chinese purchases (Stanislaw 2006).

¹⁰² The Gazprom-Centrica 'affair' led to more escalation of rhetoric from Russia about finding alternate consumers for its energy. Alexei Miller, Gazprom CEO, was reported to have responded by saying "...that unless Europe was more responsive to Gazprom's ambitions to acquire downstream assets... Gazprom would take its business to China and North America" (Light 2006: 20).

encouraging and facilitating exports from the Caspian Basin to Europe (House of Commons 2006; FAC 2008). The Caspian Basin had been growing steadily in proven and probable oil and gas reserves over the course of the 2000s, and their relative proximity to Europe signalled this region out as a possible alternative supplier to Russia. This was to be achieved both via direct EU financial and diplomatic support for the Nabucco pipeline and for progressive “...integration of the energy markets of the regions into the EU market...” via preferential trading agreements (BERR 2006: 29; see also FAC 2008; Klare 2008). Open support of processes to access Caspian resources by the UK Government, even if it took place largely via the EU, is a direct departure from previously stated policy of allowing markets to determine supply (Wicks in Henley 2008). In the 2003 White Paper the DTI had overtly explained that “...Government is not in a position to make decisions about supplies of energy...” (DTI 2003: 11). The contrast between UK, and EU, rhetoric and negotiating position on how to govern energy and some policies adopted around the mid 2000s was not lost on Russian commentators (Hadfield 2008).

Some of these policies, more protectionist in orientation, emerged in a somewhat piecemeal and incoherent fashion. There were also met with a degree of disapproval within elite energy, particularly policymaking, circles in that these types of policy had long been discredited.¹⁰³ It appears, therefore, that geopolitically informed policies were perceived as representing more of a reflexive, or knee-jerk, reaction rather than a credible, long-term solution. They seemed, furthermore, to represent geopolitical *methods* of achieving longer-term neoliberal aims in that the internationalization of freely trading energy markets remained the overall aim.¹⁰⁴ Some consistent new direction, however, was discernable at this time in the form of the renewed emphasis on establishing a more secure energy system, and the concurrent commitment to avoiding the risks associated with becoming too dependent on imports. This was to prove particularly complex in the light of the UK’s commitment, at the same time, to specific renewable energy targets.

¹⁰³ This was confirmed in various interviews between 2008 and 2010

¹⁰⁴ This is not unlike observations made about some UK reactions, in the form of more interventionist policies, to the global financial crisis. It has been suggested that although these policies could be ascribed more to Keynesian than classical economic ideas they were implemented in order to maintain, not change, the current “growth model” (cf. Hay 2010: 23).

4. UK Energy Governance: Continuity

Despite the changing hierarchies of objectives, and the advent of a number of more geopolitically informed energy policies, there remained a high degree of continuity in energy governance practices. It is worth referring back to Hall's observations about the tendency for 'institutionalised subjects' to stretch "...the terms of the existing policy paradigm..." when faced with new problems (Hall 1993: 280). New challenges had been recognised, particularly in that a security of supply crisis was understood to exist, but these challenges were largely still perceived as exogenous to UK energy governance practices would not therefore imply any particular discrediting of PEPP practices. As it turned out, however, this tendency to pave over the emerging fissures with pro-market paste did result ultimately in a growing lack of credibility in the PEPP, and in policy-makers' ability to address security, and climate, problems.

4.1 Neoliberal Perspectives and the 'International Energy Strategy'

The 2006 Energy Review and 2007 White Paper showed a growing awareness of potential problems associated with growing exposure to international energy markets and, as mentioned above, the 2007 White Paper included the first UK International Energy Strategy. Both, however, reinforced the UK's commitment to promoting open, competitive energy markets in order to ensure security of supply (DTI 2006c and 2007: 35; see also JESS 2006: 4). Producer countries, including Russia, were to be encouraged and supported to liberalise and improve governance (FCO 2006; Kirkup 2006; DTI 2007). The DTI continued to commission reports, from third party consultancy groups, that would set out in detail the case, and conditions, for liberalisation and liberal markets (DTI 2005b; Ernst & Young 2006). The policy of internationalising liberal energy markets continued to find support from various domestic interest groups, not least among which is the Confederation of British Industry (CBI) which has put forward its request that the Government promote open and competitive markets internationally (House of Commons 2007d).

The FAC report on Russia as a global security concern interestingly also underpins PEPP ideas. The report emphasised the need for bi-lateral negotiations with Russia over energy supply to be discouraged "...particularly as any agreements should be between commercial undertakings and not between Governments..." (FAC 2008:

15).¹⁰⁵ Therefore the idea that energy *should* be traded on free markets between interdependent companies continued to inform energy foreign policy to the extent that other ways of negotiating supply are understood as simply wrong.

Part of the reason for this degree of policy continuity, as suggested briefly above, is that the challenges being faced by the UK were understood as being externally generated, and not to do with the pro-market energy policy paradigm per se. Problems were associated with other countries not following a proper course of energy market restructuring, resulting in a lack of transparency and institutional underpinning (JESS 2006; DTI 2006). It might also reflect the lack of political and departmental capacity given over to deliberating energy under the PEPP, continued support from organisations such as the International Energy Agency (IEA), and to a lack of belief in alternative solutions. Such reasons for continuity will be discussed in greater length in chapter seven.

4.2 Neoliberal Perspectives and the Russian Federation

The UK's initial policy towards Russia, immediately post-Yukos, was to communicate a strong and clear message to the Kremlin through traditional Foreign Office channels ploughing on with the same pro-market narrative. The message was that growing Russian 'resource nationalism' would result in profound disinvestment by international oil companies and investors in the Russian equity and bond markets, or put more simply that the 'markets' would punish Russia (Interviews 1, 6 and 19). This position taken is similar to that reportedly taken by the US. Condoleezza Rice was quoted around this time as saying that Russian actions in respect of Yukos would have a negative effect on business investment in Russia (Guardian 2005). These diplomatic endeavours took place within the context of UK-Russia relations which had already soured considerably given Russian condemnation of the UK's decision to offer asylum to Russian oligarchs, particularly Boris Berezovskii, considered in Russia to have acted against the interests of the state (Interview 19; cf. FAC 2008).

What was remarkable about this policy line is that it shows the extent to which UK energy policymakers appeared to believe in the role of the market in disciplining, non-

¹⁰⁵ This pronouncement can be taken as somewhat ironic given the initiation of the 'UK-Russia Energy Dialogue' referenced below.

market, behaviour.¹⁰⁶ This argument found little purchase with Russian counter-parts but was repeated again by Alistair Darling, as Secretary of State for Trade and Industry, during his 2007 trip to Moscow when he emphasised that “...open and liberalised markets are in our and Russia’s business interests...” (AFX News 2007). The assumption that ‘the market’ has an interest of its own, and the will to ensure that interest, can be critiqued (see Watson 2005), and it certainly did not live up to its role of ‘judge and jury’ during the 2004 Russian energy restructuring process. The markets did not ultimately ‘punish’ Russian resource nationalism through disinvestment on any sustained basis. International oil companies, even those such as Shell and Exxon-Mobil, which had had contracts renegotiated, continued to invest in Russian resources, much to the frustration of some policymakers and analysts (FAC 2007; Interviews 6, 7, 8, 9 and 10).¹⁰⁷

The UK did start up a new bi-lateral forum for negotiation with Russia called the ‘UK-Russia Energy Dialogue’ (Interviews 1 and 6; FAC 2008: 17; cf. AFX News 2007). Information about this dialogue, and the associated forum, are very thin on the ground however interviews have confirmed its existence and some details (Interviews 1, 2 and 19). Representatives from the UK side were the Secretary of State for Trade and Industry, DTI staff and members of the business community, in the hope of reinforcing the UK message about international ‘good governance’ norms. It appeared as if UK representatives felt that, once explained more clearly, Russia might still come to its senses regarding the benefits of liberal, competitive energy governance (Interviews 1 and 6). This approach also assumes that Russia would remain a ‘rule taker’ in this sphere, underestimating perhaps Russian intentions to “...negotiate on its own terms...” (Interview 19; see also Aalto 2007; Romanova 2008). Some academic analysts were, at this time, critical of UK, and EU, inability to understand Russian approaches to energy

¹⁰⁶ This negotiating position was supposed to be underpinned by the fact that UK had become the largest single foreign investor in Russia (Lee 2007), largely via BP-TNK. Conversely, Russia is reported to have been of the opinion that the UK would not risk endangering political relations with Russia for fear of having a negative impact on BP’s business in Russia.

¹⁰⁷ Many industry participants consider Russia to be one of the better countries to invest in energy and the FAC report of 2008 also recognises this (FAC 2008). See also a recent Economist article about Exxon-Mobil’s considerable new investments in the Russian energy sector, which argues that as long as a country sits on large reserves of energy companies will always want to do business:

<http://www.economist.com/node/21528304>

governance, and to continue a dialogue based on ideas and solutions largely opposite to Russian perspectives (Monaghan 2005; Light 2006). Again all this might serve to underline arguments made thus far about a lack of capacity within UK energy governance institutions.

4.3 Climate Change Objective but Consistent Methods of Delivery

Again, in terms of throwing old solutions against new problems, there was remarkable consistency still in the instruments being applied in attempts to achieve new climate targets via energy policy. In May 2005 the Climate Change Programme Review (CCPR) had concluded that various climate targets might be missed, but the publication of the report was delayed for almost a year, until March 2006 (House of Commons 2007b). This critique of the ability of existing policy to deliver on targets seems to have been missed by the 2007 White Paper and there remained a "...continued belief in the importance of maintaining an economic design of mechanisms of support..." (Mitchell 2008: 123).

Therefore measures such as "...putting a price on carbon..." and EU emissions trading schemes persisted as the core elements of climate policy (DTI 2007: 47). Establishing a global carbon market would, theoretically, "...ensure emissions to be reduced in the most cost-effective way..." (DTI 2007: 8). The Renewables Obligation (RO) continued to represent the main mechanism for directly supporting renewable energy production, and it was suggested that more information should be made available about energy efficiency, for individuals and businesses, and measures should be taken to reduce uncertainty for business to enable investment in renewable technology (DTI 2007: 8-9). Taken together this showed, again, a lack of willingness to adopt alternative solutions for meeting climate targets.

Some DTI officials were reportedly, and perhaps understandably given that they had advised against it and given the low levels of renewable energy production at the time, shocked by the adoption of a specific renewables target as part of the 20-20-20 commitment (Interview 5; cf. Macalister 2010). This takes place within the context, referenced in chapter four, of reluctance within the DTI to commit to a renewables strategy (Interview 14). Some reportedly believed that a politically instigated switch to renewable energy might present a threat to energy security and could not, furthermore, prove cost efficient (Interview 5).

There was, furthermore, a tendency to think that targets, particularly for renewables, might not have to be specifically met, in that if the target were missed it could be made up for it via ‘safety valves’ and/or ‘compensation mechanisms’ (Interview 5). So, if the understanding was that there was ‘wriggle room’ around targets then no profound changes would need to be made to existing policy yet. Indeed the 2007 White Paper maintains the vague carbon dioxide reduction aims and the 10% renewables target, but with ‘...an aspiration to double this by 2020’ (DTI 2007: 14). The Paper does suggest, however, that in future these targets will need to be made legal and more specific (DTI 2007: 8).

What is apparent therefore is a growing commitment to using energy policy to slow climate change, whilst maintaining faith in the market model, and specifically in the private sector, to achieve that aim but with a bit more ‘direction’ from Government (DTI 2007: 9). Recognition that climate targets would need to be made more binding in future suggests that the degree of ‘deliberative’ repoliticisation taking place was allowing policymakers and analysts to understand some of the extent of what was being taken on. What might also be suggested however, and this will be expanded upon in chapter six, is a continuing degree of ignorance still of how large a task these targets might represent. This is both in terms of the costs of renewable electricity, and how these might impact upon energy ‘affordability’, as well in terms of the degree of underinvestment across the sector (Interview 12; see also Rutledge 2007).

Conclusions

This chapter has analysed in some detail processes of UK energy governance between 2004 and 2007, remarking on evidence of both consistency in and change to the PEPP, and how and why these may have occurred. Energy policy responses, where they departed from the PEPP, appear to have reflected crisis perceived as a security of supply crisis. It has been argued that the fast changing political economy of energy in Russia did have an impact on the way that energy was perceived and governed in the UK over the mid 2000s versus what had gone immediately before. It would be naive to suggest that Russia’s new energy and foreign policy might have impacted UK energy policy to the degree that it did, had it not been developed at the same time that the UK was becoming an importer once more. In addition, it is argued here that had the PEPP not

been so deeply embedded politically new Russian policy would not have been perceived as quite so ‘wrong’ or threatening to the UK way of doing things. This suggestion of a relationship between UK perceptions of unfolding events and political actions serve to underpin the notion that ideas can provide a link between context and conduct (Hay and Wincott 1998: 953).

It is also important, in terms of its legitimacy and effectiveness, that the emergent geopolitical narrative was able to draw on a long and strong tradition, in the UK, of both fearing and disapproving of Russia and of associating energy with political and economic power. Understandings that energy might not be ultimately replaceable, but subject to fixed geographic and political structures appeared to be taking hold across public, and some political, circles.¹⁰⁸ The geopolitical narrative drew on evocative language emphasising energy security specifically as a national and short-term issue. It appears that by bringing potential dangers associated with the world of energy down to these arguably more tangible levels that more people responded in a way not experienced by climate protagonists who had so long stressed a global, long-term energy and climate crisis. The success of this narrative in explaining the crisis is indicative of the importance of popular attention in evoking political response.

It is lastly worth noting, that although the objective of energy security perceived in terms of threat and insecurity had driven some related policy responses, the process of ‘re-think’ initiated during this period continued. The sense of uncertainty, triggered by events and perceptions of them, remained strongly in place despite the 2007 White Paper. This partly reflects the degree to which piecemeal, protectionist style policies appeared not to enjoy much support among policymaking teams. The addition of a more specific climate objective for energy policy, towards the end of this time period, would serve to complicate matters considerably.

¹⁰⁸ This is reminiscent, perhaps, of the notion that when we think something is readily available to us that we take it for granted, but when we lose it we realise its importance.

Chapter 6: Unravelling the Ties that Bind: 2008-10

Introduction

Chapter five suggested that the widely perceived security of supply crisis prompted a sense of urgency and renewed debate about energy governance. Assumptions about the existence of energy security, in a positive sense, were replaced by a new focus on energy supply security as an objective of energy policy – as something yet to be established. This in turn fed into the start of a process of re-engaging politically with, or ‘re-thinking’, energy and how it should be governed, a process which extends into this chapter.

The establishment of the idea that the UK was facing a security of supply crisis, combined with climate targets, and the continuing sense of uncertainty allowed for critiques of the UK pro-market energy policy paradigm (PEPP) to emerge more visibly across academia as well as in public fora. This body of work, which will be reviewed in section one of this chapter, sought to highlight not only reasons why UK energy policy needed to change, due to policy failure, but also suggested a range of solutions. Interestingly, some of the ideas suggested within these alternative narratives do become replicated in policy documents and decisions taken by Government around this time. As such there is a more audible narrative in support of the notion that problems being experienced may be endogenous to energy governance structures.

It appears that in the face of this mounting body of evidence suggesting that the PEPP was not adequate to meet the current challenges that further changes started to occur on other levels of the PEPP. Growing political contestation was taking place at the same time as the ongoing period of political ‘re-think’ referred to in the last chapter, leaving policymakers and politicians more susceptible to new ideas and solutions. What emerged first from the process of ‘re-thinking’ energy and its governance was the Climate Change Act of 2008 which made specific and legally binding commitments to carbon dioxide emission reduction and the production of energy from renewable sources. The Act was, as will be seen below, again low on details in terms of how these targets might be met.

The second real outward manifestation that New Labour had come to consider more profound change to be necessary was the decision to create a new Department for Energy and Climate Change (DECC). This Department for the first time combined responsibility for analysis and decision making for these two separate, but long argued as intrinsically interlinked, policy areas. The creation of DECC is considered here as a reasonably significant change to one of the levels of the PEPP, physical structures of governance. What is also noteworthy is that the narrative emanating from DECC showed some desire break with the PEPP, understood as the ‘markets only’ model of energy governance. Alongside this critique of the previous model another narrative emerges, but with the emphasis on energy security concerns as a direct reason for pursuing climate objectives.

What ensues after the formation of DECC is yet another a series of Energy and Climate Acts and Bills – an era of high output in terms of energy and climate decision-making reflecting also the process of ‘re-thinking’ initiated in the aftermath of the perceived security of supply crisis and which was still ongoing. These will be analysed in some detail below to ascertain whether or not profound change can be considered as happening on other levels of the PEPP, namely understanding of energy, the dominance of pro-market ideas, objectives and instruments of policy.

1. Problems Endogenous to the Pro-Market Governance System

As discussed at length in chapter two, paradigm shifts are understood to occur when the existing paradigm, including the ideas upon which it rests, has entered into a process of credibility loss such that it can be rejected (Hall 1993; Hay 1999a and 2001; Blyth 2002; Greener 2002; Oliver and Pemberton 2004). Although a process of elite political ‘re-thinking’ was ongoing at this time and objectives had been changing, what had not been visible up until 2008 was much overt political rejection of other levels of the PEPP.

This seemed partly because alternatives offered, for example those offered by the Policy and Innovation Unit energy review of 2002 (PIU 2002), were not yet taken as being credible. By overtly claiming that the existing paradigm, including within it prominent roles for markets and ‘competition’, was sufficient to answering new challenges the DTI and Ofgem had arguably left themselves open to further challenge, and potentially dwindling credibility, should this not prove to be the case. What is highlighted in this

section is that the continuing sense of energy uncertainty, despite the new White Paper of 2007, appears to have opened up a space for the emergence of a wider and more politically credible, critical debate. The sense of uncertainty was heightened by mounting evidence of policy failure, and by the sharp escalation of oil, and gas, prices in 2008. This later was referred to as the “2008 oil price shock” with crude oil hitting an unprecedented \$140 per barrel (Youngs 2009: 1; see also Behr 2009).

1.1 Mounting Evidence of Failure: Energy Security Critique

Policy documents, and some prominent analysts, had thus far largely concentrated on problems exogenous to the pro-market system as being responsible for the security of supply crisis (FCO et al 2004; DTI 2006c; DTI 2007; Helm 2005a and 2007a). At around this time geopolitically informed critics, largely within academia and think tanks, were emphasising the limited capacity of the markets to provide for certain outcomes and system properties. As such these criticisms implied that the insecurity of supply crisis could be traced also to elements of the pro-market governance system and not just to changing ‘external contexts’ (Gault 2004; Myers-Jaffe 2005; Reihing 2007). This narrative had, as argued in chapter five, not gained ground in political circles by this stage, but critique continued to escalate into the late 2000s.

There were a few publications which started to question certain aspects of the UK PEPP specifically with the central question again being that of the capacity of markets to deliver objectives but this time with the emphasis on the ‘national’ scale (Stern 2006; CEPMLP 2006; Kemp and Stephen 2007). The CEPMLP report, funded by the ESRC, suggested that the UK had experienced a loss of surplus energy, and gas storage, capacity as a direct consequence of the privatisation process of the 1980s:

(t)he widespread unease about energy security is frequently driven by concerns about the impacts of liberalisation and the market reforms of recent years. This has removed the comfort zones or cushions of excess supply, storage, etc, built up by government investment a generation ago... (CEPMLP 2006: 18).

In addition, it was noted that as privatised electricity companies have been motivated by financial returns and cost efficiency, particularly within the RPI-X pricing formula, they had not therefore been inclined to invest in the spare capacity required by the national energy system (CEPMLP 2006: 6; see also Helm 2003; McGowan 2008). Some confirmed supporters of the market system ultimately started to suggest that liberalised markets had under-delivered on investment (Mabey and Mitchell 2010).

Such arguments about market failure in terms of investment are related to others about oil depletion rates, specifically in the UK.¹⁰⁹ It has been noted that the UK Continental Shelf (UKCS) assets were depleted at a fast pace and this was attributed to the tendency of private sector oil companies to want to maximise profits on a more short-term oriented basis, partly to please shareholders (Stern 2004; Kemp and Stephen 2007). Arguments about the rate of decline of UK, and other Western, fossil fuels relate to those discussed in chapter one about the changing geography of production versus demand, and to other emerging arguments about peak oil referenced in chapter five (Simmons 2005; Leggett 2005; Kunstler 2005; Heinberg 2006; Klare 2008a; Gppi 2008; Aleklett et al 2010). The dusting off once more of the peak oil thesis which, like man-made climate change arguments, had been around for decades attests to the degree to which widespread concerns about energy supplies were leading to spaces which previously less credible voices could fill.

The CEPMLP report further observes that energy liberalisation, and the process of devolving responsibility to the market, had resulted in the reduced capacity of the UK Government to address national energy security concerns. The thinking here was that in-so-far-as energy security can be understood as a national problem then the PEPP, having devolved so much responsibility to the private sector, had left UK state institutions with diminished will and capacity to act in energy markets (CEPMLP 2006: 18). This argument serves also to highlight claims made above about the ‘deskilling’ of government with regard to energy, which will be discussed at length in the next chapter.

Lastly, from within this body of research focused on questions of energy (in)-security it is worth also highlighting a new body of work, again not just within academia, concerned with the impact of financial market speculation on fossil fuel prices. The work of such analysts became increasingly pertinent as oil and gas prices spiked to previously unprecedented levels in mid 2008 (Cho 2008; Sornette et al 2009; Kaufmann 2009; Davidson 2009). This debate found a central focal point in a 2008 investigation by the US Commodity Futures Trading Commission (CFTC), which had concluded that at one point speculators held 81% of the total of available oil futures contracts. This

¹⁰⁹ The depletion rate is the rate at which oil, and gas, is recovered from the ground. Historically ‘Western’ oil companies have tended to deplete at much faster rates than companies based in the Middle East.

was understood as distorting the, already by this stage very tight, supply and demand fundamentals and in turn contributing to the unprecedented price of oil (Cho 2008: A01).¹¹⁰ Recent work on the UK financial crisis has also highlighted the extent to which spiking oil prices were amplified by “speculative dynamics” within UK financial markets (Hay 2010: 11). Such evidence of market speculation and its impact on prices, and volatility, has often used by producer states to argue against the marketisation of energy (Presentation 6; cf. Tretault 2009).

1.2 Mounting Evidence of Failure: Climate Focused Critique

For a decade or so climate analysts, within academia, think tanks and NGOs, had been writing, with mounting frustration, of the UK Government’s lack of ability to change policy and its tendency to always seek market-based solutions, no matter what the problem (Carter 2001; Foxon et al 2005; Toke and Lauber 2007; Rutledge 2007; Mitchell 2008; Scrase et al 2009). New Labour, having been so vocal about ‘showing leadership’ in climate change policy, but by claiming that competition and markets were the credible routes to achieving climate goals, had left themselves open to critique in the event that targets were not being met. As such, although the objective of a lower carbon economy had been identified the question of *how* this might be achieved had not, for these critics of the PEPP, been adequately answered.

By this stage it was becoming increasingly easy to challenge existing policy due to the fact that results in terms of reducing carbon dioxide emissions were in fact deteriorating, particularly as the ‘easy gains’, from the switch in electricity production from coal to gas in the 1990s, were past (van der Horst 2005; Carbon Trust 2006; Greenpeace 2006; Giddens 2009; Jha 2009; Helm 2010). The UK had been missing climate targets and this was being increasingly noticed and commented upon, building on early work by the Royal Commission on Environmental Protection (RCEP) and the PIU (RCEP 2000; PIU 2002). For example, the UK had missed their 2003 renewables target of 5% of electricity by 40% and it was expected that it would miss the carbon emissions reduction target of 20% by 2010 (Van den Horst 2005: 706; cf. Greenpeace 2006: 3; House of Commons 2007b: 3). One report suggested that, corrected for the outsourcing of energy-intensive industries and coal to gas substitution and adding back shipping and aviation, carbon consumption had risen almost 20 percent between 1990 and 2005 (Helm 2010: 183).

¹¹⁰ The CFTC investigation contributed to the ‘US Energy Markets Emergency Act’ 2008.

What was also clear, however, was that claims that markets and competition would deliver an increase in the percentage of renewable energy and energy efficiency could increasingly be argued as being less than credible. Tendencies to rely on market-oriented energy policy instruments were increasingly highlighted as part of the problem (Scrase et al 2009: 6; see also Rutledge 2007; Mitchell 2008; Kern 2009; Giddens 2009; West et al 2010). The UK was being compared with European neighbours who, having pursued very different approaches to climate policy, had achieved much greater results specifically in the generation of renewable energy, but in carbon-dioxide emissions reduction also (Mitchell 2008: 122; see also Ragwitz et al 2005; Giddens 2009; Policy Network 2009; Macalister 2010; WWF 2010).¹¹¹ This was all the more ironic given the UK's regular claims to be taking 'leadership' in climate policy (Blair in DTI 2007; Brown in Cabinet Office 2008).

Arguments about a larger role for the state in energy policy started, as with the security narrative above, to make a greater impact within the widening energy debate, particularly with regard to investing in new technologies (Foxon et al 2005; Sauter and Watson 2007; IEA 2007). It was increasingly argued that direct Government involvement and or intervention should be seen as an answer to the perceived failures of the market-oriented policy framework (Held 2006; Mitchell 2008; Giddens 2009; Macalister 2010). Related to such suggestions of institutional change was the proposal that climate policy be integrated more thoroughly with energy policy in praxis (Carter 2001; PIU 2002; Held 2006; Greenpeace 2006; Giddens 2009; Scrase et al 2009).

In addition to failures to produce climate results which could now be emphasised, and reasons for which could be discussed, there also emerged some research suggesting inconsistencies between objectives (Rutledge 2007: 902). The PIU Energy Review of 2002 had suggested that there might well be 'trade-offs' between the multiple objectives of energy policy, although this point was not taken up in the ensuing 2003 or 2007 White Papers. However, recent research was suggesting escalating energy costs as the UK attempted to switch to lower carbon energy production (Interview 13; Rutledge 2007; cf. Boardman 2011), which would be politically difficult in the light of energy poverty objectives. Analysts bemoaned the lack of recognition of such trade-offs by

¹¹¹ It was argued that the German 'full' feed-in-tariff was largely responsible for Germany's high percentage of energy generated from renewable sources (Mitchell 2008; Toke and Lauber 2007).

energy policymakers (Rutledge 2007: 907; Interview 13), especially given rising, not falling, fuel poverty numbers (BBC 2009). In 2008 18.5 percent of households were still measured as being ‘fuel poor’, despite the target set in 2003 that fuel poverty be eradicated by 2016-18 (DTI 2003: 107).¹¹²

Some analysis, whilst recognising high near-term economic and political costs, also suggested that emphasis on such costs should be overtly recognised but that this should not prevent radical change from being adopted (Green Alliance 2010: 7). This would require new energy policy design not predicated largely, as was the case within the PEPP, on near-term cost efficiency.

1.3 Narrative Appropriation: Energy-Security-Climate Narrative Develops

At around this time a new narrative emerged which appropriated arguments from the geopolitical ‘national security’ narrative and utilised them to underpin long-standing claims about the need for policy change, specifically to boost investment in renewable energy. This narrative, referred to below as the energy-security-climate narrative, in combining elements of geopolitical and climate narratives, seems to have been more effective in providing impetus for change than either of the two above narratives alone.

It has been observed that narratives emphasising the need to act in order to avoid climate change had often in the past utilised evocative language of “catastrophe” evoking Doomsday type images of the world’s future if we continue with business-as-usual energy and climate politics (Giddens 2009: 28; cf. Bernstein 2001). This thesis has observed in previous chapters that this narrative might have found more purchase amongst those with the ability to think in terms of *la longue durée* (cf. Braudel and Matthews 1982), but might be less tangible for those who view the world through more short-term, and/or culturally localised, lenses. The argument here is that elements within climate groups strategically changed their narrative because they understood aspects of the geopolitical narrative to be capable of evoking political reaction, and change (Interview 18).

Specifically climate groups, such as NGOs, climate teams within think tanks, and some academics started to actively utilise fears about dependency on ‘unstable’ foreign

¹¹² Put differently, in 2003 when the fuel poverty target became an objective of energy policy 1.2 million households were considered ‘fuel poor’, by 2008 this had risen to 3.3 million homes (DECC 2011b).

suppliers and related conclusions that the UK needed to focus on increasing its domestic energy production (Interview 18; Plesch et al 2005; Roberts 2004; Greenpeace 2006; Bird 2007; Ochs 2008; Giddens 2009). One example is a report for Greenpeace entitled ‘Oil and Peace Don’t Mix’ which overtly used geopolitical ideas about energy and conflict, and growing UK reliance on imported fossil fuels, to argue for change to UK energy policy (Greenpeace 2006).¹¹³ Interestingly, analysts from within the ‘blood for oil’ school referenced in chapter one, had also started to use their evocative geopolitical visions of future conflict over fossil fuels to make arguments for an end to the industrial paradigm (cf. Klare 2008a).

Others started to formulate arguments linking the notion of upcoming peak oil with the need to invest heavily in renewable energy for electricity and transport, as well as further changes to energy policy (Hodge 2010). A particularly politically active example of the use of such arguments is the UK Industry Taskforce on Peak Oil & Energy Security (ITPOES) which included amongst its members Richard Branson and Jeremy Leggett, formerly of Greenpeace (ITPOES 2008 and 2010). The specific notion behind this group is to provide wider publicity for the argument that the world is already facing peak oil in order to remind government, and the populace more generally, about the finite nature of fossil fuels and to promote sustainable energy transition. As the report states: “(o)ur message to government and business is clear: Act now” (ITPOES 2010: 5).

As such, the growing political purchase of the geopolitical narrative, which concluded that the UK should reduce future foreign supply dependency, was held to be capable of provoking responses in a way that arguments about the urgent need to invest in and facilitate renewable energy sources for *climate* reasons had not.¹¹⁴ This perception might be particularly evident in the UK where public support for the notion that energy security represents a national security threat far outstrips interest in climate change as a threat (Niblett 2011).

This form of narrative appropriation was clever, however, in that many of these groups were also arguing, and showing empirically as seen above, that continuing to assign

¹¹³ The report also makes specific claims about the Iraq War being about access to oil for Western oil companies and about the de-stabilising effect that this war had on the world (Greenpeace 2006: 5).

¹¹⁴ Emphasis author’s own.

responsibility to the private sector to produce these investments was already resulting in poor renewable results (van der Horst 2005; Mitchell 2008; WWF 2010). DTI assumptions, as seen in the 2007 White Paper, that the European emissions trading scheme would take much of the burden of incentivising business and industry to lower carbon emissions were increasingly seen as insufficient (Green Alliance 2010: 8).

As we have seen above, a number of changes had been proposed from within the climate narrative, many of which would constitute greater state intervention, specifically to boost renewable production. They ranged from new green taxes (Greenpeace 2006; Sentence 2009), to ‘real’ feed-in-tariffs (FITs) which would remove the risk for renewable energy producers (Mitchell 2008), to a radical overhaul of the electricity system whereby a central, single buyer would be put in place who would discriminate over type of energy technology bought (White 2009). Suggestions about the need to integrate energy and climate policy remained an ongoing part of the solutions offered (Greenpeace 2006; Held 2006; Carter 2007; Giddens 2009; Scrase et al 2009; cf. PIU 2002).

This might be characterised as an instrumental process of ‘narrative appropriation’ and in this way the supply crisis becomes, in some respects only, consistent with the climate crisis. As such it managed to encapsulate both elements of the dominant, geopolitical crisis narrative whilst also offering non-business-as-usual *solutions* which challenged the PEPP. There might, however, be some irony involved in climate campaigners, who had so often in the past been more overtly focused on the ‘shared commons’ and long-term issues, now using national security and domestic production needs to underpin their campaign. Questions were being raised, for example, about the degree to which the notion that energy independence was indeed constitutive of energy security was accurate (Watson and Scott 2009: 5098). But by conflating energy security with climate change solutions these questions remained sidelined.

There were other difficulties associated with this ‘narrative appropriation’ specifically for those proposing clean, renewable energy. Arguments about the need for more domestic, or home grown, energy production were just as easily utilised by those who supported the building of a new generation of nuclear plants in the UK (Blackhurst 2004; Helm 2007; Wheeler 2007; Interviews 13 and 14). The emergence of nuclear as a ‘low carbon’, domestic source of energy is just one of the areas of conflict which can

arise when combining narratives, based on different historical perspectives, in such a way.

As one report put it,

...those concerned with ecological stability and those concerned for geopolitics and defence are sometimes not amiable acquaintances and generally operate in different spheres (Nuttall and Manz 2008: 1250).

Such differences can be pinpointed on the different ontological positions underlying the perspectives that inform climate and geopolitical security narratives. By utilising geopolitical arguments about energy security to further climate ends there has arguably been ample room for policies to ensue that might not sit well with traditional climate, read ecological, understandings of the world, nuclear energy being just one example. Such a notion ties in with those who have criticised the use of securitising language in respect of climate change specifically in that it might shift the issue into the realm of national security and zero sum political conceptions (cf. Deudney 1990 and 2006; Barnett 2001; Dalby 2009). Such conceptions have often in the past lead to state-centric nationalism, conflictual and, at times, militaristic solutions, at the cost of notions such as inter-dependence within a global commons (cf. Deudney 2006: 249-50). This thesis suggests, in line with recent critical security analysis, that 'speaking security' can (re)politicise subjects, in that it has implied greater state interest and involvement, but does not necessarily lead to militaristic solutions (cf. Browning and MacDonald 2010).

The way in which this alternative narrative developed is significant also in a number of other ways, not least in that it is echoed, see below, in important policy documents and decisions made around this time. It built on the idea, already noted by policymakers, that domestically produced, low carbon energy production will serve as a solution to both the security of supply and climate crises (DTI 2006c and 2007). But it also presented an interesting challenge in that it provided a further degree of urgency to the question of how this could be better achieved, given that existing policy was at the same time being shown not to be effective in providing for investment in renewables.

As Anthony Giddens had pointed out in his 2009 book on the politics of climate change what was starting to emerge was not the question of where energy needed to be going as

the hierarchy of objectives had already been rearranged (Giddens 2009).¹¹⁵ Instead the question was fast becoming *how* such objectives should be met and this was emerging as the area of contestation – should the UK continue to follow a market model, or, like various European neighbours before, pursue a more state interventionist policy? The question which will arise over the rest of this chapter is the extent to which arguments about the failure of pro-market systems would find buy-in from political elites to the extent that the neoliberal ideas upon which the PEPP largely rested could be seen as failing. Or whether, if change did come to be deemed necessary, it would be because of newly perceived, ‘external’ challenges rather than in recognition that the PEPP itself had partly contributed to those problems.

2. ‘Re-Thinking’ Energy as a Continuing Process

Having committed, in the 2003 and 2007 White Papers, to reaching evolving energy policy goals largely via the existing pro-market model, the DTI and Ofgem found themselves in increasingly difficult waters. As can be seen from the above section, from 2008 onwards pressure to move away from business-as-usual was mounting, and importantly, increasingly supported by evidence of failure. For some within the DTI and Ofgem, confirmed in their pro-market views, this was still not necessarily a question of the failure of neoliberal economics but of doing something to address mounting political pressure (Interview 15).

This pressure was, of course, taking place whilst political elites were not only more aware of energy as a national issue, reflecting public concern, but had also instigated processes of ‘re-thinking’ energy. This process of ‘re-thinking’ was resulting in an increased awareness of the need to address various areas of energy and climate policy as well as in some further organisational re-structuring. This indicated that as energy governance was being re-thought in order to respond to important questions around how to improve domestic energy production, a whole range of new ‘sub’ problems emerged, feeding into the sense of uncertainty about energy governance.

¹¹⁵ Although debate continued over time about the level of these targets – should they rise or not – a policy direction of lower CO₂ emissions was now in place (cf. IPPR et al 2007).

2.1 'Re-Thinking' Energy: Physical Institutions of Governance

A number of changes had been taking place reflecting the process of 're-think'. As already mentioned in chapter five, more capacity had been put into the energy division within the Department of Trade and Industry (DTI), which during 2007 changed its name to the department for Business Enterprise and Regulatory Reform (BERR). In addition processes had been put in place whereby BERR, and the Department for Environment, Food and Rural Affairs (DEFRA), would have to report on an annual basis to Parliament on progress in terms of energy and climate security (DTI 2005a). The Research Council UK's 'Energy Programme' is an example of the additional funding that was, by this stage, starting to go into energy research and development.¹¹⁶

As it became more widely reported that the UK was missing its targets, and as it became clear that the UK was indeed committed to specific renewables targets, it started to become apparent even within the DTI that a policy overhaul would be required (Interview 5). What had ensued, late in 2007, was a further process of structural re-organisation within BERR's energy division with the creation of a separate 'renewables' team, called the Renewables Directorate. This was significant in a number of ways, partly because it was formed by bringing civil servants from DEFRA's and BERR's 'renewables' desks together, but also because it showed a specific effort to address a lack of progress in terms of investment in, and production of, renewable energy in the UK.

It also marked a small change in operating practices within the energy division. Previously those working on 'renewables' within the DTI had been 'tolerated' but largely ignored and this was partly due to the DTI's reluctance to commit seriously to carbon reduction targets for fear that doing so, particularly via renewables, might endanger the reliability of supplies (Interview 5; Interview 16). In chapter five it was suggested that some BERR officials had expected there to be some 'wriggle room' in meeting the 15% renewable target (RES target). However, it was decided as 2007 progressed, and in regular contact with Her Majesty's Treasury, that the RES target

¹¹⁶ The Programme invested £530m in research and skills to 'pioneer a low carbon future', on top of £360m invested in the previous 5 years. This was mainly public money but with 'top ups' from industry. The UK Energy Research Council (UKERC) was set up as part of this spending which provided a wide range of information on the progress of renewable energy in the UK, peak oil, target hitting and other subjects. See: <http://www.rcukenergy.org.uk/home/research-councils-energy-program.html>.

would have to be met without ‘safety valves’ or compensation mechanisms (Interview 5). By late 2007, early 2008, therefore, these changes had the effect of institutionalising the new climate targets as well as representing a more concerted effort to figure out how to reach them (Interviews 5 and 15).

Likewise, at Ofgem political pressure was being brought to bear. Higher oil and gas prices had prompted consumer responses and these served to underline the notion that political awareness and willingness to act rises at times of public interest in energy, often via increasing energy costs (Interview 15). In response to this political pressure, in turn emanating from “...mounting consumer and public concern...”, Ofgem launched the ‘Energy Supply Markets Probe’ in February 2008 (Ofgem 2008: 1). This probe was couched in terms of measuring the degree to which gas and electricity markets were proving ‘competitive’ and was, as such, underpinned by pro-market ideas. In addition, some within Ofgem felt that some sort of response was necessary lest they face a greater degree of Government ‘interference’ (Interview 15). As such this can be seen as part of the process of ‘re-thinking’ energy due to political pressure albeit, at this stage, coming up with a review couched in the usual terms.

What was significant, in terms of internal Ofgem thinking, was the degree to which some staff were amazed at the level of political interference being experienced and the mounting realisation that this might indicate that things would have to change (Interview 15). Ofgem was increasingly facing specific criticism within the British media such as this attack, taking an energy security perspective, in the Telegraph newspaper:

(i)n experimenting with unproven free-market ideology, much of which defied common sense, Ofgem seemed to forget about security of energy supply and the national interest (Warner 2009)

It was around the time, of the market probe, that some pro-market personnel left Ofgem and it has been suggested that this was because they could see more political intervention coming which was understood by them as negative per se (Interview 15). This ‘moment of realisation’ within Ofgem mirrored that within the energy division of BERR, above, when realisation dawned that things might have to change in order to meet the now more serious carbon dioxide and renewables targets.

It was also around this time, 2008, that Ofgem created a dedicated ‘sustainability’ team partly in response to the 2008 Energy Act. The Act had raised Ofgem’s responsibilities in terms of contributing to a sustainable energy system such that they were now on an equal footing with duties to meet reasonable demand (Interview 15; HMG 2008b). This change to Ofgem’s mandate extended specific duties in terms of achieving sustainable energy and climate goals but it did not put these duties on a par with the principal goal of protecting the interests of consumers via maintaining competitive markets. Although it suggested a higher degree of importance for sustainability, and associated goals, it did not yet suggest to those within Ofgem specific changes to operational practices.

2.2 The 2008 Energy and Climate Change Acts

Outside of these initial institutional changes there was a discernable upping of the pace of energy governance change in terms of new Acts of Parliament. 2008 bore witness to the new Energy Act (HMG 2008b), emanating out of the 2007 White Paper and the Climate Change Act (HMG 2008a), both of which will be analysed in more detail below.

There was also a new Planning Act in 2008 directed at streamlining the planning system for nationally significant infrastructure projects including energy infrastructure (HMG 2008c). This Act also put into place a new independent, but government funded, institution in the form of the Infrastructure Planning Commission whose role it was to oversee these changes to planning on a national basis. As Anthony Giddens has suggested, the bill empowers the government periodically to issue national policy statements, some of which would identify major developments on specific sites, where it considers them to be in the public interest - such as the building of a new nuclear power station (Giddens 2009: 97). This indicates the degree of understanding that *nationally* important energy infrastructure was needed, but is clearly designed to better enable private sector investment in low carbon energy. Thus not indicating, at this stage, much reversal of ‘marketised’ de-politicisation, although overall political activity in energy was clearly on the increase.

The Energy Act, in addition to changes to Ofgem’s mandate, was largely designed to update energy legislation such that renewable energy, and other energy infrastructure such as nuclear and gas storage capacity, could be facilitated (HMG 2008b). The Act addresses arguments outlined above, from those concerned with security of supply, that

the UK's infrastructure was not sufficient to meet either new energy import needs nor domestic electricity demand projections. The response was overall, however, to strengthen regulation in order to allow for private sector investment to help maintain the UK's reliable energy supplies. This was, in part, because the Act was mainly designed to implement the legislative aspects of the 2007 White Paper, which, in turn was limited in alternative ideas about how to govern energy.¹¹⁷

It appears at this stage in the energy 're-think', and having accepted that domestic renewable production needed to be boosted, that more serious thought had also been going into how to facilitate this. The Act introduces a new feed-in-tariff (FiT), albeit a far cry from the kind of full FiT being called for among climate groups, tinkers again with the Renewables Obligation (RO) and makes provisions regarding other measures to boost energy efficiency (HMG 2008b: various). The Act did, however, allow for some strengthening of the powers of the Secretary of State. This was to facilitate the provision of a financial support programme for 'renewable heat', the first of its kind, and to modify business licences such that gas and electricity distribution companies would have to install 'smart meters'.¹¹⁸ It also allowed for some regulatory responsibilities to pass back to the newly formed Department for Energy and Climate Change (DECC), away from Ofgem.

The Climate Change Act of 2008 is another case in point of the intensification of political interest in climate and energy policy as well as of outcomes of 're-think' (HMG 2008a). This Act was held up as being the first of its kind in that it not only set legally binding carbon dioxide reduction targets up until 2050, of at least 80%, but it also set out a series of 5 year carbon budgets to 2022:

The Bill would put the UK's post-2010 carbon reduction targets into statute, define pathways towards these targets by setting successive five-year carbon budgets, make annual reporting to Parliament of progress towards these targets mandatory, and

¹¹⁷ For more information see also DECC's webpage on the Energy Act 2008:

http://www.decc.gov.uk/en/content/cms/legislation/energy_act_08/energy_act_08.aspx

¹¹⁸ Smart meters are designed to improve energy efficiency by allowing users to monitor their electricity usage. Modified smart meters could also allow distributors to switch supply off, for a second or so at a time, during lowest demand times.

create an independent Committee on Climate Change.... (House of Commons 2007b: 2-3).¹¹⁹

This is, as such, an extension of the energy objective setting exercise which had really started in 2003 when the much more vaguely worded aim of putting the UK on a path towards reducing carbon dioxide emissions by some 60% by about 2050 was added (DTI 2003). These legally binding targets, building on the decision in 2007 to sign up to the EU 20-20-20 scheme, were clearly a significant step on from 2003, making climate a significant and real objective of energy policy. This, in and of itself, does suggest a genuine new direction for energy policy. Still, however, it remained to be seen *how* targets would be achieved in that this was left somewhat open within the Act, although it was suggested that by setting legally binding targets solutions would have to be found (House of Commons 2007b). And there were dangers increasingly being associated with setting targets and not achieving them particularly with regard to credibility (House of Commons 2007b: 52).

It was also becoming clearer that the reasoning behind this concerted drive to reduce carbon dioxide emissions was based within the potent combination of security and climate fears, which was also apparent in the energy-security-climate narrative referenced in section 1.3 above (DTI 2007; DECC 2008b). One DECC presentation on the new ‘renewables strategy’, from the end of 2008, clearly states that renewables are being pursued in order to deliver carbon dioxide emission reductions but in order to provide also for “...(d)iversity of fuel sources and reduction in dependence on fossil fuel imports” (DECC 2008). The renewable strategy was furthermore being pursued in spite of the emerging realisation that this would be at a significant cost to consumers, domestic gas bills were expected to rise by 18-37% and electricity by 9-15%, barring any government subsidy or incentives (DECC 2008: slide 10).

These are all examples of the way in which new ‘sub-problems’ started to emerge as increasing amounts of political capacity was put behind thinking about energy and climate issues.

¹¹⁹ For more information see the appropriate DECC webpage:

http://www.decc.gov.uk/en/content/cms/legislation/cc_act_08/cc_act_08.aspx

2.3 New Organisations

Another important offshoot of the Climate Change Act was the creation of one more new, again independent, climate institution, the Committee on Climate Change (CCC) (House of Commons 2007b: 3). The task of the CCC was to provide external challenge and expert input into Government policy and, in addition to annual reports to Parliament, to regularly *measure* progress in terms of meeting the carbon budgets and targets. It is worth noting that the House of Commons Environmental Audit Committee observed that this new body would help to “...depoliticise the consideration of potentially necessary but controversial measures...” (House of Commons 2007b: 3). This suggests not only that it was becoming increasingly understood that aspects of the transition to a lower carbon economy might well be politically unpopular, but also that paradigmatic frameworks of ideas are hard to dispense with.

What is, however, also interesting to note is the way in which the series of quasi-government bodies set up over the course of the 2000s, but escalating in the last third of the decade, started to challenge the PEPP, partly through providing evidence of failure. In chapter four we saw that the Royal Commission on Environmental Policy (RCEP) had provided evidence of climate policy failure upon with the Performance and Innovation Unit (PIU) drew in their review of energy policy in 2002 (RCEP 2000; PIU 2002).

In 2006 the report of the Sustainable Development Commission (SDC),¹²⁰ which reported to DEFRA not the DTI/BERR, observed in detail the degree to which the UK was due to miss emission reduction targets and suggests measures to fill in these gaps (SDC 2005). In fact this ‘formal review’ was launched by DEFRA in September 2004, but it failed to publish until March 2006, a delay of over a year, because of findings about the degree to which climate targets would be missed (HoC 2007b: 7).

The House of Commons Environmental Committee, directly referencing the SDC report, also pointed to “...weaknesses in UK climate change policy...” and called for change to existing energy policy (House of Commons 2007b: 3). It raised the interesting question of the degree to which politics, and publics, had really engaged so far with climate change and associated policy. Certainly up until now it appeared that

¹²⁰ The SDC had been set up under DEFRA as a non-departmental advisory body, but became an executive non-departmental body in February 2009.

publics more widely responded to rising energy prices but not to arguments about climate change this could serve to make the higher prices necessary to achieve decarbonisation politically difficult in future. The Committee did anticipate that

(t)he proposed new framework should, however, exert a very powerful influence on policy-making at all levels of government (House of Commons 2007b: 4).

The suggestion that firm objectives could, and would, drive policy change might be partially explained with reference to Hall's observations about third order change, or paradigm shift, occurring only when the goals, or objectives, of policy change (Hall 1993: 279).¹²¹

The CCC may have been set up with the intention of depoliticising unpopular climate-driven policy, but it also served to provide further evidence of failure, to challenge policy and to suggest much more profound change. The first mandated CCC report, in October 2009, observed that current electricity arrangements together with the European emissions trading scheme (ETS), the central component of existing climate policy, were unlikely to deliver decarbonisation of electricity generation. It further suggested that as the market was failing what was needed was a more forceful role for government (CCC 2009). This report, and its damning of aspects of the PEPP, was given wide media coverage (cf. Warner 2009)

To the extent that these institutions questioned the ability of business-as-usual to meet decarbonisation goals they offer an ongoing, quasi-government challenge to the Energy Directorate within the DTI and Ofgem. There is a degree perhaps of 'institutional struggle' which takes place here in the attempt to show that the PEPP was failing and needed to change (cf. Oliver and Pemberton 2004: 419). Targets are offered as a solution, albeit whilst overtly recognising that these can only be 'first-steps' in that policy would have to change in order to meet targets:

...it is policies that will achieve the CO2 savings, we believe appropriate targets are a strong motivator for developing policies to deliver the required savings (SDC 2005: 3).

Whilst Government, and civil servants, would have been within their rights not to follow this advice, as largely happened with the PIU review of energy policy in 2002,

¹²¹ See chapter seven for a more detailed discussion of the role of objectives in profound governance change.

continuing to ignore ‘expert’ advice from bodies set up by Government specifically to provide such advice might prove more difficult over the long-term. Quite apart from whether civil servants followed this advice, these new institutions provided information upon which other political protagonists could mount their arguments for change, as already seen with the RCEP 2000 report.

3. The New Energy Department and Elite Narrative Changes

The first significant sign, however, that government was prepared to make changes to existing structures of governance on any significant scale came at the end of 2008 with the establishment of the Department of Energy and Climate Change (DECC). The decision to form a new Department to take responsibility for energy, and climate, policymaking can be taken as significant in terms of this analysis of profound governance change in that it represented a relatively high degree of change to the level of physical structures of governance. Chapter five had outlined a number of new policies put forward in the 2007 White Paper, which were informed by a more geopolitical perspective. The changes analysed below seem to be informed more, however, by a climate perspective.

3.1 The Department of Energy and Climate Change (DECC)

In chapter three the changing fortunes of dedicated energy ministries, or departments, was referenced. During the 2000s, escalating in the mid 2000s, constant changes were made in terms of which political figure would have outright responsibility for the energy portfolio and where they would sit in the hierarchy of Government. Generally, however, no particular emphasis had been placed on this role and, in 2005, the job of energy minister had been described as a ‘junior backwater’ position (Leake 2005). This was all about to change radically. Towards the end of 2008 a number of departmental and ministerial changes were made, not least amongst them the creation of the Department of Energy and Climate Change (DECC). Alongside the new Department the first Commons Select Committee on Energy and Climate Change was established.¹²² As outlined above, some smaller organisational amendments had already been made within the energy divisions of the DTI but this was a change on a quite different scale and of far greater significance.

¹²² See: <http://www.parliament.uk/business/committees/committees-a-z/commons-select/energy-and-climate-change-committee/role/>

According to the ‘Machinery of Government’ paper which accompanied these changes, part of the reasoning behind the formation of DECC was to focus “...ministerial responsibility on today’s challenges...” which should, in turn, facilitate a unified Government response (Cabinet Office 2008: 1).¹²³ Energy security and climate change are identified as key issues facing the UK, and DECC was specifically designed to take responsibility in addressing them. This appears to raise energy security and climate change not just up the hierarchy of energy policy objectives, but also up a broader scale of UK national priorities. The new Department’s Public Service Agreements (PSAs) and Departmental Strategic Objectives (DSOs) reflected this mandate such as to “...(l)ead the global effort to avoid dangerous climate change...”, and to “...(e)nsure the reliable supply and efficient use of clean, safe and competitively priced energy...”. Interestingly, however, there remained, alongside new mandates, a DSO to contribute to BERR’s DSO to deliver free and fair markets, with greater competition, for business, consumers and employees (Cabinet Office 2008: 4).

The establishment of DECC marked a significant claw back of energy’s political status from a division within a Department, to a Department of Government with representation at Cabinet Office level via the Secretary of State for Energy and Climate Change (SSECC). This marked an end to the uncertainty that had surrounded what position energy should hold ministerially. It also signified the placement of energy in more direct proximity to Government institutions and responsibility and, as such, some reversal in ‘technocratic’ depoliticisation. DECC was the strongest sign yet that energy was being re-conceptualised, and no longer just a ‘commodity’. Furthermore, DECC’s new mandates can be considered relevant with regard to the measurement of change due to the clear contrast that can be drawn with previous institutional mandates. The primary PSAs, and DSOs, of the DTI/BERR were, are still are, focused much more around the provision of free and fair markets particularly to support business.¹²⁴ As

¹²³ The Machinery of Government Act also included the creation of the ‘National Economic Council’, to ‘co-ordinate economic policy across government (Cabinet Office 2008: 1). There had been some Parliamentary opposition to this departmental restructuring by the Prime Minister – questions were raised about whether ‘...the Prime Minister should continue to exercise near-absolute power to reorganise the Civil Service Departments (House of Commons 2008: 3).

¹²⁴ Although, to complicate matters, it should be noted that BERR has since been restructured and has become the Department for Business Innovation and Skills (BIS).

such, DECC was the first organisation in British history with a specific mandate focused on achieving climate goals.

The way in which DECC was structured also, in effect, reflected one of the key climate arguments of the past decade or so. As referenced in chapter two, and here above, many had argued for some time that energy and climate policy could, and should, not be considered separately from one another (Carter 2001; PIU 2002; Held 2006; Greenpeace 2006; Giddens 2009; Scrase et al 2010). Although the PIU review of 2002 had suggested that a new institution be created to take responsibility for climate, energy, and transport, policy the 2003 White Paper had overtly rejected this idea (DTI 2003: 113).¹²⁵ DECC's webpage, under 'About Us', now claims that "DECC... reflects the fact that climate change and energy are inextricably inter-linked..." (DECC 2011). As such this appears to be the institutional formulation of an idea which had emanated from within the climate narrative, perhaps suggesting a willingness and ability to listen to alternative narratives in the search to meet new objectives.

In effect DECC was created by bringing together the energy divisions from within the DTI/BERR with DEFRA's "...international and domestic climate change policy, energy efficiency, fuel poverty, and radioactive waste teams as well as the Office of Climate Change" (Cabinet Office 2008: 3). As mentioned in chapter four, there had been a history of institutional struggle between the DTI's energy division and DEFRA climate policy teams and this had been a question not only of methodology but also, arguably, of objectives and mandates. Clearly, prior to 2007 the DTI did not have to treat de-carbonisation targets as a binding objective of energy policy.

Ex-DTI civil servants now found themselves not only having to work together with the "woolly", non-economic DEFRA civil servants, but also driven by a specific climate PSA (Interview 5). Not only this, but more resources were assigned to the climate change teams over the energy security team, roughly 100 to 35 staff (Conversation 2). Some energy analysts, as had been the case with Ofgem, were fearful of increased "political involvement" in energy policy-making, and some therefore stayed within BERR and did not move to DECC (Interview 2). The intention appears to have been

¹²⁵ This is because of the claim that Government needed '...to concentrate (its) energies on following through the commitments we have made, not on creating new machinery' (DTI 2003: 113).

not only to force some exposure to new ideas from both sides, but to also attempt to reduce the level of institutional struggle by assigning common goals and objectives.

Together these are taken as being institutional changes with a degree of profundity and staying power. Although the office of the Prime Minister could exercise “near absolute” power in the reorganisation of Civil Service Departments (House of Commons 2009: 3), further major departmental re-organisation would still be politically difficult, in terms of capacity and cost. The way in which this change to the physical institutions of power was enacted hints strongly at change being directed at energy policymaking teams from above. One interview conducted with a former senior policy adviser to the Prime Minister has suggested that under both Tony Blair and Gordon Brown there were strong tendencies for, at least attempting, top down governance (Interview 20). It might be suggested that this took place particularly at times of perceived crisis, as suggested in Tony Blair’s response to the 2000 pickets discussed in chapter four (Blair 2010). The role of narratives and alternative ideas is, arguably, just as important within this understanding of change in that they can inform the type of change pursued and well as providing reasons to change.

3.2 Elite Narrative Changes

In terms of policy paradigm change what has been observed thus far, as a reminder, has been a change in the objectives of energy policy, with the re-emergence of security as an objective and legally binding climate objectives, underpinned by a profound change in the physical institutions of governance. What will be outlined below is the emergence of a new narrative within DECC which was concentrated at the ‘top’, but did not necessarily descend too far into the ranks of the new department. This narrative overtly raised the question, long discussed amongst geopolitical and climate analysts, of the role of state and market within energy and climate governance.

It is worth noting, at this point, that the end of 2008 also saw the real unfolding of the financial crisis. It has been observed, in the crisis response of Gordon Brown in particular, that there has been a change of narrative, and a growing willingness to be overt, about the notion of market failure (Hay 2010: 22).¹²⁶ Given the degree to which

¹²⁶ It is worth noting, briefly, other interpretations of Brown’s political thought. McLean and others have suggested that ‘market failure’ was always there in Brown’s thinking, despite the narrative about being the ‘Iron Chancellor’ (cf. McLean 2006).

New Labour had managed not to challenge neoliberal economic orthodoxy up to this point the narrative of government intervention and market failure was noteworthy:

...in a sense it is quite remarkable that it is even credible, as I think it is, to pose the question of whether the public rescue of the banking sector heralds the return to an era of Keynesian economics: a paradigm shift made in the context of crisis (Hay 2010: 22).

Hay concludes that a return to Keynesian economics has not occurred as a result of the financial crisis, but this context of wider narrative alteration made it easier, perhaps, for the new SSECC, Ed Miliband, to pose questions about the UK's energy governance structure. An early speech from Mr Miliband outlined his views on the role of the state in energy governance (Miliband 2008). He contrasts the ideas underpinning Nigel Lawson's version of energy strategy, namely based on the notion of "markets only", to the new framework that would be required to meet the twin goals of energy transition and energy security (Miliband 2008: 3). Lawson's successful attempt to fundamentally challenge received doctrines about the market and the state in energy policy through the imposition of a 'markets only' view of energy policy, was suggested, by Miliband, as being passé. It is worth noting that these ideas were not presented as being 'wrong' in and of themselves, but in that they were now considered unfit to meet today's challenges.

Miliband suggested that dynamic markets on their own were no longer enough for a successful energy policy, particularly in that we can no longer assume that private incentives add up to the public good of decarbonisation and energy security (Miliband 2008: 4). Again the language here is notable in that energy, albeit in the form of security and low carbon, appears once more to be understood as being of intrinsic value to publics as opposed to a replaceable commodity. Thus, a 'strategic role for government' is suggested in that it provides

(s)trategic policy that takes action where there are market failures and provides the right incentives for the public good (Miliband 2008: 4).

This speech was given to a particular audience, at Imperial College London, and might therefore be designed in a different way to, say, a Government White Paper. It is, however, an overt challenge to some of the assumptions underpinning the PEPP also in that it presents energy as more akin to a public good than to a commodity or traded

good. This is relevant in assessing change to the PEPP level of understandings of the nature of energy.

In 2009 Malcolm Wicks, twice former Energy Minister at the DTI, produced a report which also reflected elements of alternative energy narratives.¹²⁷ Wicks had been requested, by the Office of the Prime Minister, to become the new ‘Special Representative of the Prime Minister’ in energy security and to compile a report on the UK’s energy security. The resultant report, ‘Energy Security: A national challenge in a changing world’, was specifically designed to review implications of developments in international energy markets for the UK’s future energy security – the most obvious sign thus far that Government felt the need to understand more about the international energy context and of the ongoing process of ‘re-think’ (Wicks 2009).

Overall the report sounds very similar to arguments put forward within the energy-security-climate narrative analysed above, and has further undertones of ‘speaking security’ about it. He opens with the suggestion that the “... geopolitics of energy insecurity will be a key theme for the 21st century...” underpinning this assertion with many arguments familiar from within geopolitical narratives regarding peak oil, insecure foreign suppliers and growing competition for fossil fuels which would accelerate as the world moves out of recession (Wicks 2009: 1). Wicks’s regular reference to the need to reduce import dependence and for “home grown”, renewable energy as a part cure for energy insecurity, as well as to mitigate climate change, might have come directly from within the security-climate narrative discussed above (Wicks 2009: various). This approach clashes considerably with pro-market notions of secure energy supplies as taking place on open markets within a positively economically inter-dependent world (Mitchell et al 2001: 177).

Much of this also echoes closely the idea, also outlined in the section on the energy-security-climate narrative, that an insecure energy future has profound and nationally significant implications. Evocative images of energy insecurity seem to be used in that they most effectively underpin the need for change and for increased production of domestic energy. It may be that this narrative was being utilised in that governance change, which often implies new winners and losers, in order to support climate change

¹²⁷ The Wicks Report was published, and given significant media coverage, in the run up to the United Nations Climate Change Conference in Copenhagen.

mitigation was less likely to find popular support in the UK, than change proposed in order to boost the more popular notion of energy supply security.

The Wicks Report also observed, perhaps more controversially, that

... the era of heavy reliance on companies, competition and liberalisation must be reassessed (Wicks 2009: 1)

This report did, therefore, also overtly suggest that the current model, particularly in that it over-relies on competition and liberalisation, needed a further and radical re-think. This is an early sign of elite political recognition of questions, raised in alternative narratives, about the ability of markets to deliver energy and climate security and is also symptomatic of the ongoing process of ‘re-think’. Together the way in which the ‘official’ narrative was emerging at this time shows momentum behind the process of change and, in addition, direction away from the previous orthodoxy that markets could be relied upon to provide secure and low carbon energy. This may therefore, suggest more open questioning of the merits of ‘marketised’ de-politicisation.

Both the Wicks report, and the subsequent ‘Response to the Wicks’ report, produced by DECC, underpin movement away from thinking about energy as replaceable and as less nationally important (DECC 2009c). Miliband specifically suggests, with reference to Malcolm Wicks that “...energy security be seen as much as a national security issue as an economic issue...” (Miliband in DECC 2009c: 1). These understandings challenge the notion that politics should not intervene in energy whilst upholding arguments put forward that energy supplies, once threatened, had grown in significance and had come to be understood on the national level. These conceptualisations of energy and security build on observations made in the previous chapter about emerging changes in the PEPP level of ideas about energy.

Partly in reflection of new understandings of energy security as a national issue yet another energy institution was formed, the cross-departmental International Energy Committee, to provide a mechanism for improved “...senior level co-ordination of international energy policy” (DECC 2009c: 31). Strengthened Ministerial oversight was also to be provided, including an annual assessment of energy security issues.

4. Governance Outcomes of ‘Re-think’ to May 2010

This section examines policy documents produced by DECC with the aim of assessing not only the degree of substantive policy change, but also to assess the degree to which alternative ideas, reflected already in Miliband and Wicks’ public communications, disseminate through these documents and impact upon how governance developed. Clearly, some of these documents directly address work carried out prior to the formation of DECC, but they by and large progress policy in a direction away from the previous paradigm.

What was immediately noticeable is the scale of difference in terms of output on energy and climate policy. DECC, whatever other kind of change it represented versus the PEPP, did seem to participate fully in the process of trying to understand and address the difficult questions, and related sub-issues, that climate and energy security posed. The new DECC website also represented a steep step-change in how information about UK energy policy was disseminated and, as such, marked a serious improvement in transparency and access to background research. This could be taken an outcome of the ongoing process of deliberative re-politicisation.

4.1 Policy Documents and Legislation

This period, between the formation of DECC at the end of 2008 and the general election of May 2010, saw a very high level of analysis, the publication of yet more policy documents as well as new legislation. It seemed to mark a step up in the attempt to get to grips with the question of *how* to transition to a low carbon economy, now that new objectives had been structurally incorporated legally, whilst maintaining secure supplies. Part of figuring out how to transition had necessitated a much higher level of commitment to deliberating energy, ‘deliberative’ repoliticisation, partly through the creation of a range of new institutions, and partly through actively searching for solutions. What is noticeable in this ongoing search is that certain solutions previously not deemed worth considering, such as having a ‘single buyer’ of electricity, started to become part of a range of possible changes being considered (i.e. Ofgem 2010).

4.1.1 The Low Carbon Transition Plan

In the Summer of 2009 DECC produced ‘The UK Low Carbon Transition Plan’ which was the first attempt to respond to the mandate laid down by the Climate Change Act to start providing policy solutions to enable meeting carbon emission reduction and

renewable energy production targets (DECC 2009a).¹²⁸ The Carbon Budgets, administered by DECC, had implications for all UK government departments and were understood to put DECC in a central position within this process of ‘culture change’ across Government (Miliband 2010).

The Low Carbon Transition Plan marked an increase in the level of state financial support being offered to facilitate the production of renewable technologies, including research and development, and improve energy efficiency. DECC announced their intention to directly fund four new demonstrations of capturing and storing emissions from coal power stations, to channel about £3.2bn to help households become more energy efficient, to roll out smart meters in every home by the end of 2020 and to provide further state investment in offshore wind (DECC 2009a: 4). In addition, it was announced that the legislation would be further amended to make Ofgem’s responsibilities clear. Specifically, although competition was still recognised as a valuable mechanism for protecting consumer interests, Ofgem’s mandate was further clarified such that it should in future recognise that there are other means which can be utilised to protect these interests (DECC 2009a: 4).¹²⁹

This new plan went further in underpinning the idea that energy and climate change are inter-related, this time in that transition to a low carbon economy had become the agreed solution for both climate change and energy security (DECC 2009a: Introduction). The report also openly admitted that there would be ‘costs’ associated with this process of transition (cf. DECC 2008). This is a marked change from previous government documents which either largely ducked or under-played the issue of rising energy costs, thereby failing to address the question of how these costs might impact upon the other objective of tackling energy poverty (DTI 2003 and 2007).

By openly admitting that the cost of energy, and electricity, would rise it allowed DECC to start suggesting how to address this apparent contradiction between objectives. As it stood fuel poverty, at 18.5% of households in 2008, was already dramatically on the rise

¹²⁸ Although the economic fall out from the banking crisis was by this stage also facilitating carbon dioxide emission cuts, of 18% in 2009 on 2008 levels (DECC 2009a: 4).

¹²⁹ This mandate change is refined again in the 2010 Energy Act: “Ofgem should consider whether there are alternatives (to competition) or additional measures that might better protect consumer interests before taking action” (DECC 2010: 1).

(BBC 2009; DECC 2010b: 9). The plan recognises that government should seek to minimise the costs associated with energy transition and “...to apportion them fairly...” (DECC 2009a: Introduction). It goes on to propose that impacts upon “...the most vulnerable...” would be mitigated through a new “...mandated social price support...” and through upping the level of the Warm Front grants (DECC 2009a: 4).

4.1.2 Renewable Energy Policy

Alongside the Low Carbon Transition Plan, DECC also produced the first dedicated Renewable Energy Strategy which was presented to Parliament in July 2009 (DECC 2009b). Reminiscent of the geopolitical narrative which had emerged in the mid 2000s, this Plan for the first time actually specified an objective of reducing fossil fuel demand by 10%, thereby also reducing the need to import gas by 20-30% against forecasts for 2020 (DECC 2009b: 7). As such, production of renewables was now understood not just as being about achieving climate targets but also about ‘home grown’ energy as preferable to certain imports:

(t)urning to renewables will help the UK recover some of its energy self-sufficiency, while assuring that more of our imported energy comes from reliable sources (DECC 2009b: 10).

This language might be taken directly from one of the political groups involved in the security-climate narrative appropriation discussed above, which had also been echoed so strongly in the Malcolm Wicks’ report.

Renewables, however, as of 2009 remained vastly under-invested - only 5.5% of electricity was generated via renewable sources, 2.6% of transport energy and in heat the UK was still generating ‘very low levels’ from renewables (DECC 2009b: 8). As such the EU target of 15% of all energy from renewables by 2020 was understood, by this stage, to be undeliverable.¹³⁰ This target, as laid out in the Renewable Energy Strategy, implied that electricity generation from renewables would have to rise to 30% by 2020 (DECC 2009b: 8). This, clearly, was ‘challenging’ and demanded change to existing policy, which was now more clearly understood within Government to be under-delivering on renewables.

¹³⁰ When the EU targets were finally set in 2008 Britain’s share of renewables was so low that their target was revised down to 15% (Helm 2010: 183).

As such, this new plan sought to “...put in place mechanisms to provide financial support for renewable electricity and heat worth around £30bn between now and 2020...” largely via, yet again, amending the Renewables Obligation (RO) but also through the introduction of the first ‘feed-in-tariff’ (FiT) aimed at domestic production (DECC 2009b: 8). This FiT was by no means, a full, German-style, ‘risk free’, feed-in-tariff aimed at large scale renewable generation, but did represent at least a ‘first step’ for the UK (cf. Mitchell 2008). To oversee and administer all of this a new ‘Office for Renewable Energy Deployment’ (ORED) had been established within DECC who were now responsible for making sure that the UK delivered on its renewable targets (DECC 2009b: 9).¹³¹

This represents a change from the PEPP in a number of respects. Firstly, emphasis on direct state support and legislation, even if it fell quite far short of that seen in Germany, Sweden and other European countries, marked a departure from previous policy. The 2009 Climate Change Act impact assessment report dedicated the opening section to answering the question, in recognition of what had come before, as to why intervention in the markets was understood as necessary (DECC 2009d: 3-4).¹³² What these documents also showed, in the degree of planning which had gone into ensuring growth in renewable energy generation, is that UK energy policy was no longer ‘technology blind’. This contrasts openly with the 2003 and 2007 White Papers which had both clearly enunciated that it was not the job of government to decide on sources of energy for the UK (DTI 2003 and 2007). It might also be suggested that, in terms of renewable energy representing ‘home grown’ energy, much emphasis was still being placed on facilitating the production of energy from other sources, including coal and nuclear (Wicks in Wintour 2008; Mitchell 2008). This reflects ideas dominant prior to the instigation of the PEPP about relying on nuclear, and other domestic sources, in times of perceived supply crisis.

¹³¹ For more information see:

[http://www.decc.gov.uk/en/content/cms/what we do/uk supply/energy mix/renewable/ored/ored.a_spx](http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/ored/ored.a_spx)

¹³² This report contained ideas not dissimilar to some of the arguments put forward in the PIU report back in 2002.

4.1.3 The Energy Bill

At the end of 2009, and following on from these two major policy papers, another Energy Bill was presented to Parliament which received very quick Royal Assent just ahead of the elections in May 2010. The Bill put into place the mandatory social price support, clarification of Ofgem's remit, measures to tackle electricity market power exploitation and a commitment to yet more regular parliamentary reports on progress on energy and climate objectives (DECC 2009c).

The Energy Bill made provision for a great many of the policies and mechanisms proposed in the climate and renewables plans. Interestingly, and building on the 2007 White Paper, it specifically

...sets out plans for the world's largest package of statutory financial support for clean coal (Miliband in DECC 2009c: 1)

This was the carbon capture and storage incentive aimed at supporting four separate demonstration plants in the UK, thus also allowing for a boost to the UK renewable energy economy. Again this policy shows overt state financial support for indigenous as well as potentially clean energy, thereby killing energy security and climate birds with one stone.

Also around this time, but after the Energy Bill, a 'Gas Policy Statement' was produced which outlined actions to be taken in order to ensure that gas supplies remain reliable (DECC 2010d: 1). This infers acknowledgement, if not overt, of various critiques emanating from within narratives concerned about energy security and the lack of infrastructure spending, particularly on storage capacity, in the UK (Stern 2006; CEPMLP 2006; Kemp and Stephen 2007).

4.2 The Process of 'Re-think' and Continuing Uncertainty

What is also interesting, over this time period, is that despite the plethora of policy responses to the challenge of understanding *how* and what to do to transition to a lower carbon future still more research and questioning was considered as necessary. This is perhaps the clearest sign of one of the outcomes of 'deliberative' and 'technocratic' depoliticisation, in the form of 'deskilling', that had taken place under the PEPP, as much as it is of the degree of work now needed to reverse that position. The high level of research and deliberation continued unabated, even despite the unfolding of the credit

crisis and recession which might have, under other circumstance, provided a more than worthy distraction for political attention.

One clear example of this ongoing drive for further understanding is ‘Project Discovery’ which was an in depth study of the various challenges now understood to face UK energy and climate governance matched with a range of options in terms of addressing them (Ofgem 2009 and 2010a).¹³³ Project Discovery, initiated early in 2009 as a response to the changes in Ofgem’s statutory duties under the Energy Act 2008, was designed to explore “...whether current market arrangements are capable of delivering secure and sustainable energy supplies...” (Ofgem 2009: 2). The consultation document was issued in October 2009, just before the new Energy Bill was presented to Parliament, indicating that despite the range of new policies which were in the process of being adopted Ofgem now felt that even more change would be required.

Project Discovery was the first Ofgem report to focus on security and climate objectives, forced arguably by the mandate changes showing the importance of such mandates in policymaking processes. It appears as an exercise of ‘re-thinking’ their position on energy which had been based, almost entirely, in protecting near-term consumer interests via ensuring competitive markets in electricity and gas. Having ultimately concluded that current market arrangements needed to change, with a high degree of emphasis on substantial investment requirements of £200bn over ten years, the project goes on to consider what policy responses might be required (Ofgem 2009).

In terms of these policy responses, Ofgem suggested five different routes including, most notably, the single buyer model (Ofgem 2010a: 3). This model, whereby one single buyer would centrally buy all generated electricity which it would then distribute, was one of the more radical of the options being suggested by alternative political groups within ‘change for climate’ and ‘national energy-security-climate security’ narratives. For Ofgem, historically so adamant in its arguments about market energy, to openly suggest this model in a very public document can perhaps also be a sign not only that change was understood as necessary, but change of a more structural and less

¹³³ Not long after the Conservative-Liberal Democrat coalition came to power in May, DECC was asked to produce a departmental analysis very much along the lines of Project Discovery. Some have suggested that the new energy team was unhappy with Ofgem filling the role of chief investigator which they felt should belong to DECC (Interviews 12 and 13).

‘problem solving’ nature.¹³⁴ This realisation is, in turn, significant in the process of energy governance change in that Ofgem, and its senior executives, had, as discussed in chapter four, represented some of the stiffest opposition to any movement away from energy markets in the past.

The level of continuing active deliberation within Ofgem, DECC and the various new organisations set up to monitor, assess and advise them, could partly be explained by to changing mandates, objectives and requirements to report to Parliament. In contrast to energy governance under the PEPP and associated degrees of deliberative, marketised and technocratic depoliticisation, these new institutions represented a growing capacity to question and understand, if not to act. This might, however, also indicate that despite new targets, and the realisation of their urgency and tractability, new programmes deemed both credible and able were still thin on the ground. Although solutions such as the full, German feed-in-tariff and the single buyer model had been suggested, they still represented too much of a break with current UK energy institutions (Interviews 14, 15 and 16). In this way, the search for solutions continued well into 2011, and no doubt, will beyond and suggests a lack of credibility in the more state-led model adopted by countries like Germany, Denmark and Sweden.

4.3 The Energy Governance Structure 2010

As will be discussed at more length in chapter seven, this thesis does not claim that a completed process of policy paradigm change had taken place by 2010. Arguably too much uncertainty still existed, too many changes were still in the process of being discussed and made, and too much support for pro-market ideas about how energy should be governed persisted. What had emerged, however, were changes to most levels of the PEPP, and the new structure, taking account of these changes, is outlined thus:

¹³⁴ Albeit one senior Ofgem staff member suggested that the ‘more extreme’ suggestion of single buyer had been included more in the spirit of making it look like all options had been considered (Interview 15).

Table 4: The New Energy Governance Structure: 2010

Ideas about Energy	<ul style="list-style-type: none">•Energy and climate inter-linked inextricably;•Energy as an issue of national concern;
Ideas about Economic Governance	<ul style="list-style-type: none">•Markets work, but under different circumstances;•More state assistance to transform energy;
Physical Structures	<ul style="list-style-type: none">•New Department, DECC and Ofgem mandate altered;•New dedicated institutions reflecting alternative narrative.
Objectives	<ul style="list-style-type: none">•Legally enforceable climate objective across government;•Security of supply, and affordability;
Methods	<ul style="list-style-type: none">•Markets remain responsible for energy supply;•New instruments: feed-in-tariff, greater subsidies

This appears like an area of governance which, having travelled quite far down the process of policy paradigm change, has not yet quite made it. In fact, there does not seem, in Oliver and Pemberton terms, to have been a full battle to institutionalise a new paradigm given that a coherent alternative set of ideas and solutions was not adopted by enough political and other interest groups (cf. Oliver and Pemberton 2004). If anything can be claimed, however, as a new norm amongst these changes it would be way in which the deliberation of, and policies put toward, climate and energy policy had become inter-twined in an ‘energy–security–climate nexus’.

Conclusions

It is, perhaps, remarkable that there should have been two Energy Acts within less than two years. The speed with which DECC managed to produce these major policy documents and legislation is indicative of the degree of urgency which had, post 2006/7, started to press on Government thinking about energy and climate change. It is almost as if, once the process of deliberation had commenced, it both became more apparent that the PEPP was failing whilst, at the same time, more and more detail started to emerge about how much needed to be done to progress towards fulfilling the

new hierarchy of objectives. Hence the plethora of debates, discussions, policy papers, consultations, impact assessments, reports to Parliament, new institutions, Acts and Bills which define this period.

In attempting to measure policy paradigm change at this point it can be concluded that shifts had, to a greater or lesser extent, occurred in every 'level' of the PEPP. In terms of ideas about the nature of energy it is noticeable the degree to which energy was now talked about as a national policy issue, rather than as a sector of the economy or fungible commodity. The new objectives of energy policy had, by this stage, and in an extremely public way, become firm, and in the case of climate targets legally binding. Albeit not enough was being done to recognise and counter the ways in which the rising cost of electricity would interact with energy poverty objectives. DECC had been established upon the idea that climate and energy policy needed to be considered together due to the extent to which they are inter-related and inter-dependent within the process of pursuing energy transition. Ofgem had also, by this stage, been mandated to alter its practices such that energy sustainability and security would become priorities. As such the objectives and physical structures of governance had undergone quite significant change.

These changes that had so far taken place suggest a high degree, also, of repoliticisation particularly of the 'deliberative' and 'technocratic' kind, if not of a 'marketised' kind. Certainly it appears that although ideas about energy's role in society were altering, ideas about the role of the markets in delivering energy supplies were not. Neither had there been any radical turnaround within elite policymaking circles regarding the role of competition and economic efficiency. In sum, therefore, although some changes had taken place to each level of the PEPP these did not appear to add up to profound governance change and this question of sufficient conditions for claiming profound governance change will be taken up in section three of the next chapter.

Chapter 7: The Complex, Uncertain and Lengthy Evolution of Change

Introduction

The role of this chapter within the overall thesis, as promised in chapters four to six, is to reflect in a bit more depth on the various iterations of change over the course of the 2000s, and on differences in the way in which change evolved between each of the three empirical chapters. It will do so by looking back at each chapter in turn and considering how energy governance evolved, through the application of notions of policy paradigms, how and why change takes place, and de- and repoliticisation as outlined in chapter two. The various iterations of change analysed can then in turn be used to reflect on theoretical implications emanating from the thesis as a whole.

The first empirical chapter, four, suggested the emergence of various challenges to the status quo in energy and, in response, a high degree of resilience within the five levels of the PEPP. Although it appeared on the surface that the objectives of energy policy were changing, this chapter questioned the degree to which this really was the case. The degree of resilience can be explained in particular through the application of the notions of ‘technocratic’ and ‘deliberative’ de-politicisation. By considering the PEPP during this period of growing climate challenge we can better understand both ways in which the PEPP managed to continue to draw on existing ideas and other structures in answer to problems, newly perceived to be actionable, and ways in which challenges to the PEPP were defused.

Chapter five suggested that heightened political and public concern about the security of UK energy supplies prompted a process of repoliticisation, as well as a ‘re-think’ of energy, accompanied by some more geopolitically informed policy responses overlaid on top of the PEPP. This chapter will seek to trace relationships between geopolitical narratives of supply insecurity, growing public and political interest, processes of ‘deliberative’ repoliticisation, and the start of the lengthy process of ‘re-thinking’ energy. Some consideration, within this, will be given over to the role of wider public perception and the language of security in prompting political re-engagement with energy. It will also be suggested that one factor in drawing out and extending the process of ‘re-thinking’ energy was the degree to which it became apparent that state capacities to govern energy, and to present new solutions, had shrunk under depoliticisation.

In chapter six the process of ‘re-thinking’ energy is understood to still be ongoing. It is however also accompanied by mounting evidence of failure, and alternative solutions being produced by increasingly high profile but competing political protagonists. It is during this era that it can be claimed that change really started to escalate as evident in new institutions and evolving ideas about energy and new methods of governance. This chapter concluded by suggesting that although a degree of change had taken place within each level of the PEPP, it did not yet feel like a planned process of policy paradigm change had been completed. This is largely because, as of the end of 2010, market ideas about energy governance had not been rejected by political elites nor had a comprehensive new framework been accepted.

What can be identified therefore across the empirical chapters are three broad eras of the evolution of change: consistency of interpretive framework and associated structures; re-politicisation of energy under conditions of perceived crisis; and tendential change - even if not yet representing a significant break with the past. In total these eras of change have led to an emphasis on the complex, messy and evolutionary nature of change, but they also raise the question of what might constitute necessary conditions for paradigm shift to be considered as taking, or having taken, place.

1. Challenge and Resistance: 2000-3

The analysis of UK energy governance in the early 2000s showed that despite mounting challenges, particularly from the Performance and Innovation Unit’s (PIU) Energy Review of 2002, the PEPP managed to remain largely intact. What did seemingly change, however, was the addition of new climate and social objectives to energy policy. Given Peter Hall’s observation that third order change takes place only when the objectives, in addition to policy instruments and settings, change these new policy objectives might have been considered as significant in measuring profound change (Hall 1993: 279). However, at this time the other four levels of the PEPP remained consistent and the below analysis will use various notions, including those of ‘technocratic’ and ‘deliberative’ depoliticisation, to further explain this apparent contradiction.

1.1 Embedded Paradigms and Inertia

Despite the series of mini-crises in pro-market energy, Enron, California and the 2000 UK refinery pickets, and declining North Sea output energy was not widely considered to be in crisis at this time. What was arguably far more important during this period, particularly in terms of public perceptions and political contestations, were the September 11 attacks and the emerging War on Terror. Clearly much political capacity, intellectual and financial, was being actively put behind making a case for war in Iraq, preparing for the war and fighting it, without, of course, making much open reference to Iraq's substantial oil reserves. It would not be at all surprising if energy, and climate change were, on a comparative basis, on the political back burner at this time. Particularly as large scale governance change would have to be understood as justified, and understood to warrant the degree of political, financial and human capacity that would need to be committed.

Never-the-less, in terms of explaining the degree of consistency within all levels of the PEPP whilst objectives ostensibly changed, it is useful to dwell in some detail on the ideas that impacted most actively on policymaking at this time and the degree to which they had become embedded. It has been suggested that there has been an observable closeness between theory and praxis in energy (Ciuta 2010), and this arguably applies in both periods of 'normative' and of 'normalised neoliberalism' (cf. Hay 2007: 98). Under 'normalised neoliberalism' in energy, however, the emphasis was no longer about *how* energy should be governed, as it was assumed that that question had been answered, but about how to problem solve within that given framework. 'Problem solving' is used here, following Robert Cox, in the sense that "...(p)roblem solving assumes the functional coherence of existing phenomena..." (Sinclair 1996: 6).

The observation that the PEPP represented a "...high degree of functional coherence..." under New Labour in the early 2000s relates closely Peter Hall's definition of a policy paradigm as an interpretive framework within which policymakers work which not only defines problems, and therefore solutions, but is also often "taken for granted" and "...un-amenable to scrutiny as a whole" (Hall 1993: 279; cf. Campbell 1998). One of the consequences of policymakers working within interpretive frameworks is that sets of *unexamined assumptions* emerge which influence the objectives of policy, preferred

methods of achieving those objectives, and physical structures of governance.¹³⁵ These assumptions are cast in terms of ‘common sense’ and are understood, certainly, as the correct or appropriate way of doing things. They remained unexamined to the degree that the framework that binds them is relatively deaf to challenges expressed outside of its terms, or using different or non-expert language (cf. Adler and Haas 1992; Kern 2009: 53; Mahoney and Thelen 2010).

Unexamined assumptions about energy governance, particularly at the level of methods of achieving objectives, can be found littered across policy documents from the early 2000s, including the 2003 White Paper. This partly reflects the degree to which policy paradigms are self-referential, to which they fail to look beyond the boundaries of what is considered appropriate, in that old methods are thrown at new problems (Hall 1993; Helm 2005a and 2007a). This was especially evident in the series of claims made that new climate and social objectives, however vaguely worded, would be met by the markets, through competition as one of the main drivers (DTI 2003: various). In fact, the lack of new policy instruments is highlighted in the 2003 Environmental Audit Committee report for the House of Commons. Whilst recognising the stated commitment to environmental objectives as a positive step it also observes that

(o)ur fears about implementation have proved largely justified. The Energy White Paper is weak on specific measures and contains little that is new (House of Commons 2003: 2)

This observation about the degree to which assumptions remained consistent, and unexamined, serves partly to offer an answer to the principal question posed in chapter four about how new instruments of policy, or methods, did not accompany new objectives. One of the specific challenges to the PEPP posed by the PIU Energy review, among others, was for energy policy to formally commit to new, climate objectives (RCEP 2000; PIU 2002). By including as a compromise the new climate objective in 2003 this challenge could, at least for a period of time, be defused. By also arguing that the existing framework allowed for this objective to be met compromise could be achieved without any more profound change to energy governance structures.

¹³⁵ The term ‘unexamined assumptions’ is taken from Ian McEwan’s 2010 novel ‘Solar’ which is about a climate sceptic, Nobel prize winning physicist who, for career reasons, becomes involved in a project to produce photovoltaic power. Although this is a work of fiction it reflects very closely debates prevalent within energy and environmental discourses today.

We have looked at a number of reasons thus far as to why the PEPP remained static overall despite objectives changing, but here it might be worth looking, in a little more detail, at the objectives themselves. It was claimed, in chapter four, that the stated objectives became more complex in 2003 on an official basis – moving from one central objective that included within it different elements, to four separate objectives which included, for the first time, climate goals. It was also claimed that the climate objective, in particular, was very loosely worded and a far cry from the much more specific suggestions in the PIU review, which had also included the notion of ‘trade-offs’. The PIU, in addition, had been specific about the need for climate targets to be given priority in any trade-offs between objectives (PIU 2002: 52). What also seems apparent, from several interviews, is that the new objectives were not at this stage taken as absolute within the DTI, and certainly not within Ofgem (Interview 5; 13; 14; 15; 16). DTI and Ofgem civil servants were now back in control of designing energy policy post the PIU review process.

The 2003 White Paper included little recognition of trade-offs, nor any overt recognition that there might be instances where such judgement was required between objectives (DTI 2003). Again, this omission could be assigned to the consistency of ideas within the interpretive framework, given that it was proposed that competition, free markets and expanding liberalisation could, theoretically, go such a long way towards achieving each objective. It was also noted at the time that the 2003 White Paper was not accompanied by any kind of departmental implementation plan (House of Commons 2003: 2).

Before returning, below, to further implications of depoliticisation and policy paradigms for the PEPP, it is worth considering other actors involved in these processes. ‘Number Ten’ had directly requested the 2002 review of energy in anticipation of the UK’s changing import-export status and in the light of New Labour’s ‘commitment’ to climate change (Interviews 13 and 14; PIU 2002). It is significant, however, that it was claimed to me, in interviews, that when faced with a report that implied a high degree of change, Tony Blair sidelined it and passed responsibility back to the ‘experts’ at the DTI and Ofgem. It is also noteworthy in that the Prime Minister is said to have considered the 2002 review “a step too far” – leaving him, and those more directly

involved in energy policymaking, well outside their comfort zones (Interviews 13 and 14).

This position adopted can be seen as more understandable in the light of quotes from Blair that "...capital liberalisation is *right*..." and that "...the market is an ally not an enemy... we understand the benefits of open markets" (Blair in Watson 2002: 196). It can also be understood in the light of other political commitments at this time, not least the war on terror, and the degree of support for the PEPP and continuity within and outside policymaking circles. Although challenges to pro-market energy consistently emerged from the climate perspective, elsewhere, all eyes were arguably on foreign and not domestic policy. Influential sectors of the economy, not least among them the financial services sector, stood to continue to gain through liberalised, privately funded energy markets. In the 2000s it was also widely hoped that 'spot markets' would start to emerge for gas which could ultimately undermine the position of those suppliers who continued to insist on long-term contracts (Interview 1; Helm 2003; DTI 2007).¹³⁶

1.2 'Technocratic' Depoliticisation and Institutional Mandates

This sub-section will apply more closely the notion of 'technocratic' depoliticisation, originally proposed in chapter two, to unpack further *why* so little change was taking place, especially at the level of physical structures of governance. This form of depoliticisation infers over time some more structural elements to the PEPP not dissimilar to the concept of "institutional depoliticisation" suggested by Flinders and Buller (Flinders and Buller 2006: 298-9). The degree to which the notion of passing responsibility to relevant 'experts', often at 'arm's length' from central government institutions (cf. Flinders and Buller 2006; Hay 2007), had become embedded at this point had had specific implications for the PEPP, and in addition, helps to further explain resistance to change. A significant factor within this process of passing responsibility to experts was that these experts, in turn, were often chosen, as argued in chapter three, partly because they supported the interpretive framework and the primary role of the markets in terms of energy supply and trade.

¹³⁶ This position reflects the counter-point to arguments put forward by large suppliers of gas, i.e. in Russia and Qatar, that the size and timescale of investment requirements in developing and producing gas mean that long-term contracts are a requirement for stable and successful long-term trade (Interviews 7 and 17).

Whilst the 2003 White Paper set out what it called a “...challenging, long-term, agenda for change...” it also confirmed that no new organisation, or in the terminology of this thesis physical structures of governance, would be needed to facilitate this change (DTI 2003: 113).¹³⁷ In effect therefore when responsibility for responding to the PIU review was passed back to the DTI’s Energy Directorate chances of profound change occurring dropped significantly. Experts at the DTI, and Ofgem, were not just strong proponents of pro-market ideas about energy governance but these institutions actually embodied some of these ideas in that their structures perpetuated ‘technocratic’ depoliticisation. Ofgem was ‘independent’ and energy remained a sub-division of the DTI, leaving elected Members of Parliament, and Cabinet officials at one remove from deliberating energy and how it was governed.

Those tasked initially with setting up these physical structures of governance, such as Stephen Littlechild and Eileen Marshall, were part of the generation of economists who believed in restricting government involvement (Littlechild 1981; Robinson 1981; Robinson and Marshall 1981; Littlechild and Vaidya 1982; cf. Yarrow 2010), or in terms of this thesis ‘technocratic’ de-politicisation. These economists, and those that followed who were also informed largely by Austrian School economics and ‘evidence based’ policymaking, encouraged, from the top down, the use of economic models and analysis within the DTI and Ofgem (Helm 2003; Interview 13; Yarrow 2010).

Interviews conducted in the energy division of the DTI and at Ofgem confirm that within the pecking order, particularly of Ofgem, classical economists were always “at the top” of the organisation (Interview 13). They also confirmed that those involved in producing analysis supporting energy policy, and in advising on policy outcomes, actively believed that ‘economics’ trumps ‘politics’ when dealing with the energy sector (Interviews 1, 2, 6, 13, 15, 16). All of this conforms to notions, suggested in chapter two, of policymakers as institutionalised subjects and of specific institutional structures as restricting the access of social groups to bureaucratic leaders (Yee 1996: 92), and setting the parameters of what people talk about (Schmidt and Radælli 2004: 197).

¹³⁷ Again, this decision is opposite to the suggestion in the PIU review that, long-term, a new Government Department be established with responsibility for energy, climate and transport (PIU 2002: 13).

References have repeatedly been made during these interviews to the idea that politicians are “bad” at making decisions which might affect energy, and to the related idea that politics just ‘muddies’ the pristine waters of economics (Interviews 1, 2, 15). This might represent a certain, rational choice informed, perspective but it may also suggest that the degree of ‘deliberative’ depoliticisation had left generalist politicians less informed about energy, and therefore less able to make ‘informed’ choices.¹³⁸

It is worth returning here to the question, raised in chapters two and four, of the degree to which energy experts were operating strategically with reference to concepts used within the literature on ‘epistemic communities’ (Adler and Haas 1992). These suggest that hiring and training practices have a high degree of influence over which interpretive frameworks are actively influential within given institutions. In fact everyone, bar one, interviewed for this thesis involved in energy policymaking at the DTI, Ofgem and the Foreign and Commonwealth Office (FCO), was trained in classical economics, with a clear emphasis on market economics, modelling and statistical analysis. One expressed not only their surprise, but also their delight, at the high degree to which economic modelling, learnt at University, was applied in the process of energy policy decision-making (Interview 15; DTI 2003: 20).¹³⁹

The one non-economist met in interviews had been trained, within the DTI, in ‘basic economic principles’ so that they could apply these to analysis and decision-making (Interview 1). In fact the understanding was that as long as staff understood basic economic principles they would be equipped to work within any division of the DTI, not just the energy division.¹⁴⁰ In this way reasonably high degrees of turnover were experienced both in Ofgem and the energy divisions of the DTI (Interview 15), which, in turn, relates to the important question of human capacity to deliberate about energy as a specific topic area within the context of this policy paradigm and under conditions of

¹³⁸ Given the notion that markets function best when participants are informed, within conditions of transparency, the situation of less informed politicians might be interpreted as somewhat ironic.

¹³⁹ Three of the four sub-divisions within the energy division of the DTI were given over to statistical analysis and running the models which would monitor, maintain and underpin energy decisions (Interview 2).

¹⁴⁰ This was by no means ‘uncommon’ practice, the IEA has also, almost from inception, been dominated by faith in the market and by a tendency to hire only economists (Friedrichs 2011: 4). These arguments have also been made repeatedly about the IMF, WB and other IGOs.

‘technocratic’ de-politicisation. As such it appears that the ‘experts’ to whom responsibility had been passed were first and foremost experts in market economics, but not necessarily in energy, and certainly, as energy policy critics had suggested, not in considering wider social impacts of energy policy.

Compounding these tendencies, human resources dedicated to carrying out the necessary analysis and decision-making were, by 2003, at “...an all time low...” and it has been claimed that the future of the DTI’s Energy Directorate was also “in doubt” at this time (Helm 2003: 399-400). When the Cabinet was reshuffled in June 2003 Stephen Timms became Labour’s *fifth* energy minister since 1997. Not only had there been many incarnations of energy ministers, reinforcing observations above about staff turnover, he was on this occasion given a very broad remit in that the role of Minister for Energy would now *also* include responsibility for telecoms and postal services. This led some to claim that energy policy had been further downgraded to a status meriting only a “part-time minister”, let alone a Secretary of State reporting directly to the Cabinet (Helm 2003: 400; see also Leake 2005). The growing degree to which responsibility for energy remained divorced from processes of active political deliberation continued to have implications for the PEPP, but also reflected the fundamental assumption that it was ‘experts’ not politicians who should be involved in deliberating energy.

To make this point about implications for the PEPP, it is worth returning here to the importance of statutory responsibilities within the DTI and Ofgem. Chapter three highlighted the significance of passing responsibility for energy to a division within the DTI, not just because it was at this time understaffed and very much set within the pro-market interpretive framework, but also because of the DTI’s own particular statutory responsibilities. The DTI was tasked principally with supporting UK business and delivering “...free and fair markets, with greater competition, for businesses, consumers and employees...” (DTI 2008: 15). This mandate, with its emphasis on facilitating businesses, served to institutionalise, and structure pro-market ideas about how energy should be supplied, i.e. by the private sector.

In addition the DTI had not, up until 2003, been officially mandated with the consideration and delivery of climate objectives, this had been the job of DEFRA. It is hardly surprising, therefore, that when the need arose to respond to climate solutions put

forward in the PIU review that the DTI settled on such vague and loosely worded climate objectives, which some then took to be less than absolute. In addition, non-competitive, non-free market solutions to new objectives would have appeared to be beyond the legitimate remit of this kind of mandate.

Similar arguments can be made about Ofgem and the degree to which its formal responsibilities stood in the way of change. As a reminder, the Utilities Act stated that Ofgem's primary duty was to

...protect the interests of consumers, present and future, wherever appropriate by promoting effective competition between persons engaged in... the generation, transmission, distribution or supply of electricity...' (Ofgem 2006: 107).

Emphasis on the centrality of competition within assigned responsibilities would prevent Ofgem from pursuing 'non-competitive' instruments, even if it did take new objectives as absolute, or even if staff wanted to. Ofgem was, over time, assigned other secondary and tertiary responsibilities, particularly within the "...social and environmental guidance...", but these were not perceived to be capable of over-riding Ofgem's primary responsibility (Mitchell 2008: 141).

Callum McArthur's involvement in sidelining the PIU report and its findings, referenced in chapter four, served to highlight institutional, in this case Ofgem's, resistance to change. Personnel within the DTI have, however, suggested that if the DTI could be labelled as economistic and market oriented, especially in comparison to the qualitative and "wooly" DEFRA, then Ofgem was practically off the end of the economistic scale (Interviews 5, 13 and 16). This is significant in terms of maintaining the PEPP as much responsibility for policy analysis, decision-making and delivery had been passed to the independent Ofgem and as such they were perceived as having been 'drivers' of the liberalisation agenda (Interviews 5, 12, 13 and 14). Historically, when the DoE was disbanded, many of the prominent economists went to Ofgem, leading some to comment about 'de-skilling' within the DTI (Interview 13). This suggests a degree of emphasis on the independent body over the DTI's Energy Directorate, which conforms to public choice and pro-market preferences for depoliticising energy and removing it from "... the political arena..." (Helm 2003: 386; see also Kern 2009). It also raises questions, however, of how this regulator could continue to claim 'independence' to the degree that it was involved in policy decision-making. Perhaps, because economics is

considered to be neutral the degree of Ofgem's involvement could be argued away as a-political.

1.3 Deskillling and 'Deliberative' Depoliticisation

It is argued here that 'de-skilling' within the physical structures of energy governance is another important outcome of 'technocratic' depoliticisation, alongside the lack of physical capacity referred to above. When arguing that the Utilities Act of 2000 was a sub-standard document, Helm has suggested that the DTI bill team simply lacked sufficient resources, as well as specific utility experience and expertise, to handle such complex and technical matters (Helm 2003: 292). This tends to confirm observations made above that the emphasis within this process of 'technocratic' depoliticisation had been on economists as qualifying as 'expert' rather than on those with specific experience of energy sectors. It also suggests that the energy divisions, being understaffed, were also operating at sub-optimal capacity and in this way 'de-skilled'.

What is perhaps also noteworthy at this point was the intellectual distance between the initial ideational context of the late 1970s and early 1980s, within which the structures of the PEPP were developed, and policymakers within the DTI and Ofgem in the late 2000s (Yarrow 2010: 5). In the absence of much specific 'energy' expertise decisions were based on more generalised market economics, models and statistics – somewhat divorced both from the complexities of the energy sector, and importantly, politics.

Arguments about the understaffed and de-skilled energy division within the DTI can be put forward to explain why, for example, such little understanding was displayed about just how expensive renewable energy would be, or of considerable potential contradictions between the objectives of promoting renewable electricity and of reducing energy poverty (Interview 12; Helm 2003: 300; cf. Rutledge 2007). What is also noteworthy along this line of thinking is that mounting evidence of changing supply and demand patterns in international energy, perceived from within the PEPP, did not seem in the early 2000s to pose much threat (DECC 2003). This is despite growing political, and Departmental, awareness of the UK becoming an importer once more. At this stage, however, the PEPP interpretation of, amongst other events, growing Chinese and Indian demand was sanguine, given assumptions about how international markets would continue to develop in a more 'marketised' direction and given assumptions about positive economic interdependence (DTI 2003: 78-9; cf. PIU

2002: 53). Deskilling, along with ‘deliberative’ depoliticisation, might also account for why, when a security of supply crisis did emerge that the reflex was to return to 1950s and 1970s ideas about facilitating more domestic energy production, including from nuclear. In these continued underestimations of the complexity of energy, perhaps, we can identify seeds for future credible challenges to the PEPP.

It appears that, aside from a degree of deskilling, ‘technocratic’ depoliticisation also fed into processes of ‘deliberative’ depoliticisation. By attempting to remove energy from politics (cf. Helm 2003: 386), and by passing responsibility for decision-making away from Hay’s ‘sphere of Government’ (Hay 2007), energy did become largely removed from active political deliberation at Cabinet level and within the Houses of Commons and Lords. Only a small community of experts were understood to be qualified to deliberate energy, many of whom were, ironically, not *energy* experts per se. Furthermore, by insisting that only experts could really understand what needed to be done, with the help of complex, unexplainable models, generalist politicians might both appear and feel less than qualified to comment.¹⁴¹ The fewer instances that elected Members of Parliament had cause to be involved in thinking about energy matters, the less they would presumably know about energy. This would be a ‘good’ thing under public choice theory as politicians are too generalist, anyway, to understand economic subjects such as energy and too motivated by subjective political interests (cf. Hay 2007: 95-97).

This is somewhat missing the point, however, in that what MPs are, theoretically, equipped to do is represent the interests of their constituents and to openly relate outcomes of policy choices to policymaking decisions (cf. Wood 2011). In this way public debate and deliberation about the positive and negative outcomes of policy choices should allow policy decision-making to maintain a system which meets social and national requirements on an ongoing basis. One of the principal criticisms of the PEPP was, in the 1980s as well as in the late 2000s, that it failed to take sufficient account of social considerations and system properties on a national basis (Keegan

¹⁴¹ One senior energy policy advisor has remarked that the NETA model of electricity market regulation was designed largely by one executive at the DTI, but when they moved to Ofgem no-one at the DTI had the specialist knowledge to understand this system (Interview 14). If energy analysts working within energy policymaking teams could not understand the system there would, arguably, be little possibility for generalist MPs to do so.

1985; Hope et al 1986; Cooper 1987; CEPMLP 2006; Mitchell 2008). This is akin to Hay's notion of politics as deliberation, and as *informed* agency and choice (Hay 2007: 67; cf. Wood 2011). If, however, politicians are unaware of what those policy choices are, or how alternatives might work, a self-fulfilling prophecy unfolds whereby outcomes can be divorced from decisions made ostensibly to meet the needs of the UK population.

'Deliberative' depoliticisation appears to represent a less planned or strategic form of depoliticisation than 'technocratic' or 'marketised' which both came about through specific political decisions. It might also provide a useful underpinning in instances of 'secretised' depoliticisation. A lack of general deliberation about, awareness of, and understanding about the complexities of energy can be beneficial in the instances that decisions about energy become 'secret'. Certainly in looking back at Tony Blair's actions in terms of addressing the refinery pickets of 2000 there was little open deliberation about how Government should act in response – decisions appear to have been taken by Blair, without consultation, and then communicated to the army and police (Blair 2010: 296).

1.4 Theoretical and Other Implications

Chapter four, therefore, and the further theoretical analysis provided here of the ways in which this specific policy paradigm, the PEPP, fought off challenges provides a picture of a reasonably static, conservative governance system. Although New Labour had put greater political momentum behind seeking to address climate related issues, the compromise position reached largely reflected established ideas about energy, its governance and institutions. In fact compromise, by including new, but vague climate objectives, may have represented a policy of defusing climate calls for change. As such, at this point, notions of policy paradigms and the degree to which they can self-perpetuate through institutionalisation and depoliticisation hold up well (Hall 1993; Jacobsen 1995; Hay 1998, 2001 and 2007; Woods 2011).

This degree of 'in-built' resistance to change can further explain the frustration experienced by climate change protagonists waiting for what they considered to be essential energy governance change to facilitate climate objectives (Jacobs 1991; Carter 2001 and 2007; Mitchell 2008; Scrase et al 2009). This section of chapter seven has suggested that pro-market ideas were deeply embedded within the precise ways in

which the institutions of energy governance were structured, but the population at large was also not supportive of the notion of ‘man-made’ climate change. Various UK polls have over time confirmed the relative lack support for notions of man-made climate change (cf. BBC 2010; Niblett 2011). A cursory glance at the Australian anti-carbon tax protests of August 2011 give a clear indication of how politically difficult it can be to implement climate measures in a country where man-made climate change, or the need to change behaviour or policy to address it, is not a majority view.¹⁴²

References to the long-term and global effects, albeit potentially devastating, of burning fossil fuels seemed not to have had the same degree of impact as, perhaps, elsewhere in Europe. In the absence of widespread popular support for, or interest in, climate arguments there seemed little incentive, or even perhaps possibility given forces still in support of the PEPP, to change the status quo. Change inferring, as it often does, both political costs and different sets of winners and losers within the political economy. In a broader sense those suggesting more radical changes, for example to pro-market systems of governance, and not just to energy policy, to facilitate climate goals still found themselves on the political margins (Jacobs 1991; Carter 2001; Bernstein 2001; Paterson et al 2003; Mitchell various). This is clear within Prime Minister Blair’s decision, having invited a new, team to review energy policy in 2002, then passed responsibility to respond back to the DTI.

The compromise position reached in 2003 after the challenge of the 2002 PIU energy review however, in that it did allow at least for superficial climate and energy poverty objectives, may ultimately have contributed to conditions within which more credible challenges to the status quo in energy could be heard. This is because, as already noted in chapter four, by stretching the terms of a given policy paradigm a loss of integrity and credibility may well occur especially given the persistence of anomalies between, in this case, new objectives and actual outcomes (Hall 1993: 280; cf. Oliver and Pemberton 2004). As such this very process of self-perpetuation in itself, as also seen

¹⁴² The poll undertaken by the BBC suggested that although 75% of people thought that climate change was ‘a reality’, only 26% believed it to be a ‘man-made’ event. It had long been recognised by climate protagonists that question of climate change are not a salient issues in UK national elections (Carter 2001: 119). For more information on the protests in Australia see: <http://www.bbc.co.uk/news/world-asia-pacific-14554882>.

above in the example of sanguine perceptions of the international energy environment, may well have opened up possibilities for more credible future change and challenge.

2. Repoliticisation and 'Re-Thinking' Energy: 2004-7

If the process of continuing to look inward to find solutions may have contained within it possibilities for future change to the PEPP, then this section considers how further impetus for change actually came about. The way in which processes of paradigm change were conceptualised in chapter two suggested that as anomalies between objectives and outcomes, and uncertainty about what to do, continue to mount competing narratives may emerge as being better able to explain the situation and to proffer credible solutions (Hall 1993; Hay 1996; Wilson 2000; Blyth 2002; Oliver and Pemberton 2004; Widmaier 2005; Widmaier et al 2005). As it stood at the end of 2003, however, the PEPP appeared, certainly overtly, to have 'seen off' the climate challenge implied in the PIU review and other reports.

2.1 Uncertainty and Anomalies

As outlined in chapter five, what is reasonably clear when looking back at policy documents from the mid 2000s is that energy was indeed in a period of flux and uncertainty. When, in 2004, Russia re-nationalised its core energy companies reactions within UK energy governance circles were as shocked as they were damning (Interviews 3 and 6). The very idea that a country, considered since the 1990s as an emerging economy, might either want to challenge, or be capable of challenging, the direction of international energy governance, had just not been seriously considered. This can partially be attributed to the degree to which assumptions about international energy, and importantly a lack of capacity given over to analysing international energy politics, had led to an under-estimation of what might be possible or of potential objections to further marketisation. It might also be possible to suggest that if more trained diplomats had been conducting energy relations with Russia, and not just economists and business representatives, that a more informed position might have been maintained (cf. Lee 2004; Williams 2005). Certainly, initial elite and departmental reactions to Russia's policy shifts were based on the notion that Russia would change its behaviour when the UK directly explained the error of its ways (FAC 2008; Interviews 1, 6 and 19).

As events continued to unfold through 2006, particularly with the advent of the Russia-Ukraine gas transit dispute, levels of uncertainty about energy, and how to proceed, rose whilst it also became increasingly an issue for political debate. One example of the level of uncertainty surrounding energy governance at this time was the high degree of fluctuation, referenced in chapter six, not only in Energy Ministers but also in how this role was defined (Miliband 2008; cf. Helm 2003). The level of fluctuation in key energy personnel might reflect political uncertainty but somewhat belies, however, the degree of consistency in the fundamental operations of the PEPP.

It was almost as if energy's resurgence as a subject for political debate dictated some sort of response, but what that should be was at this point still far from clear. This was then played out in key personnel alterations, which not only outwardly displayed uncertainty but did nothing to demand confidence in UK energy governance. In essence, the degree of uncertainty in response to unfolding events suggests, particularly with the benefit of hindsight, that the PEPP, partly through 'technocratic' and 'deliberative' depoliticisation, was not equipped to deal with what was happening. It might also reflect an emerging period of post-normal science where "...facts are uncertain, values in dispute, stakes high and decisions urgent" (Ravetz in Friedrichs 2011: 2).

What is important therefore when considering this period as part of a process of profound governance change is that anomalies were starting to be perceived between objectives and outcomes, in line with the process of paradigm change outlined by Hall and others (Hall 1993; Hay 2001; Blyth 2002; Oliver and Pemberton 2004). As secure and competitive supplies of energy still remained an objective of energy policy, then volatile and rising oil and gas prices, along with fears about unreliable producers and growing political interference, would result in this objective not being met. Such a stark anomaly in energy governance would be difficult to ignore in political terms if, as suggested below, it started to become more widely perceived and debated. It was also already being claimed that climate targets, still largely part of DEFRA's mandate, were being missed.

Certainly energy analysts and policymakers were beginning to become cognisant of the fact that these events, perceived as unpredictable and exogenous, might have

consequences for UK energy policy (Interviews 3, 5, 6, 13; Ofgem 2009).¹⁴³ This suggests a new twist in that the UK, in the sphere of energy governance, was reacting to policymaking elsewhere instead of being, as it had been over the past decades, a rule giver and “model” energy reformer (cf. IEA 2006).

2.2 Speaking Security, Repoliticisation and Political Interest

Given that anomalies and uncertainty were emerging, conditions within which change could theoretically take place were therefore starting to be met (cf. Blyth 2002). What would further be needed, to make more sense of this period of uncertainty and to provide further impetus for change, would be a clear, alternative narrative providing both acceptable explanations of, and related solutions to, policy contradictions (Stone 1989; Hay 1996 and 1999; Blyth 2002; Oliver and Pemberton 2004; Widmaier 2007). However, as already suggested in chapters two and five, this analysis appears to suggest that the dominant explanation of these contradictions did not proffer a complete, or necessarily credible, set of solutions nor, at this stage, a credible critique of pro-market ideas about governing energy.

The increasingly dominant crisis narrative of the mid 2000s did, however, reflect the sense of shock being experienced as well as the level of disapproval of the direction in which Russian energy policy was moving. The situation, of security of supply crisis, was explained using old notions of energy as an influential material asset, of Russia as a powerful, potential enemy, and of the UK as being correct in its pursuit of ‘free and fair’ energy markets. Russia emerged as the “energy superpower” using its bonanza of natural resources to bully and threaten the West (Roberts 2005; Robinson 2006; Wagstyl 2006; Ostrovsky 2006; Fox 2006; House of Commons 2007a). These interpretations, although underpinned by geopolitical ideas about how the world works, were arguably also influenced by the degree to which Russian actions were understood as presenting a threat to the UK’s preferred methods of governing energy.¹⁴⁴

Given the emergence of this alternative, if not entirely new, energy narrative in public and elite circles it might be worth considering how the *type* of explanation accepted might be significant in terms of possibilities for change. New institutionalist accounts

¹⁴³ Unpredictable, perhaps, only to the extent that technocrats had not foreseen them.

¹⁴⁴ The degree to which the PEPP was considered as ‘British’ was underlined by claims that there is a “British model” (Thomas 2006).

of paradigm shift have emphasised the role of narratives in explaining crisis, and in bringing about a return to certainty by offering a related, and comprehensive, set of solutions (Hay 1996 and 2001; Blyth 2002; see also Schmidt 2006). This geopolitical narrative did offer a plausible explanation of crisis, even if it failed to offer a comprehensive or credible set of long-term solutions. This section focuses more, however, on the way in which emerging perceptions of credible threats to the UK security of supply facilitated change and partly *why* the process started to accelerate and take hold.

In section 3.2 of chapter two it was suggested that the notion of ‘securitisation’ might have something to tell us about the ways in which changes to energy governance were both understood as necessary and facilitated, the *how* and *why* of change (Wæver 1995; Buzan et al 1998; cf. Browning and MacDonald 2010). What the analysis in chapter five seems to suggest is that political interest in energy was renewed specifically in response to widely reported perceptions of foreign threats to energy supply, at a time of rising UK energy imports and prices. This is in line with suggestions that the language of security is evocative and that it represents the language of political priority (Wæver 1995; Buzan et al 1998; see also Ciuta 2010). As such the re-ignition of political interest observed in chapter five in response to the geopolitical crisis narrative might be expected within the terms of the notion of ‘securitisation’.

What might be less expected is that although the geopolitical narrative did encourage some lasting geopolitically informed policy response, for example that secure energy is ‘home grown’ energy, it was also capable of resulting in a degree of ‘deliberative’ re-politicisation and a process of ‘re-thinking’ energy. Recognition of energy as a security issue seems to have prompted its re-evaluation to a subject of national importance, as opposed to a sector of the economy, thereby making it politically more relevant and arguably demanding some sort of state response. This might tie in with long-standing notions of security as a public good which Government is responsible for providing (cf. Wæver 1995).

What is interesting is that, in this instance, the Government’s response necessitated a degree of ‘deliberative’ re-politicisation in that it became clear over time that the state had lost considerable capacity to understand the complexities of energy. Government was considered to be more responsible, given that the narrative was of national energy

supply security, but lacking in information and knowledge both about what was happening and what to do about it. It might be plausible to argue that it is precisely the lack of Government capacity which then triggers the degree of ‘technocratic’ repoliticisation discussed in chapter six and section three below. These necessities also provide a link between securitising moves and ‘deliberative’ repoliticisation. These are not the kinds of responses to ‘securitising moves’, or ‘speaking security’, envisaged within the Copenhagen School, nor by those that critique the securitisation of climate change (Deudney 1990; Barnett 2001; Dalby 2009). They do, however, support suggestions made within critical security studies that securitisation does not *always* have to lead to decision-making behind doors nor to conflict inducing, or militaristic, solutions (McDonald 2008: 580; cf. Floyd 2007; Browning and McDonald 2010). Although it does suggest that subjects, once understood as security issues, are more likely to become the responsibility once more of the state.

To bring us back to a suggestion made in chapter two, this understanding of the role of securitising moves in re-igniting political interest, deliberation, and more open debate does not necessarily need to pose an outright contradiction to Copenhagen School concepts. This is because, as Ole Wæver has suggested, when a subject becomes part of a process of securitisation it can travel on a continuum between ‘non politicised’ through ‘politicised’ to ‘securitised’, defined as decision-making behind closed doors, or in secret (Wæver 1995).¹⁴⁵ Energy appears to have started to travel the continuum from non- to politicised, but did not become securitised in that it had entered, and remained, in the realm of overt political deliberation. Thus what is important to note, is the connection between emerging public and political interest, perceptions of insecurity and the potential for political agency. As such the act of ‘speaking security’ can be understood as having lent energy a degree of political saliency, importance and deliberation which it had not enjoyed prior to the mid 2000s.

This suggestion that ‘speaking security’ can serve as a catalyst for ‘deliberative’ repoliticisation is not, in this respect, particularly different to associations of crisis with suitable conditions for change (Hall 1993; Hay 1999 and 2001; Blyth 2002; Greener

¹⁴⁵ This end of the continuum is then characterised as ‘depoliticised’ (cf. Wæver 1995). As suggested in chapter two, it is worth making the distinction clear between a successfully securitised subject, which emerges as ‘depoliticised’, and one which is not fully securitised in that it remains politically salient and open to further debate.

2002; Widmaier 2007; Chwioroth 2010). It has also been suggested that repoliticisation can be understood as explanatory of change in that it implies the possibility for collective agency (Wood 2011: 21). As discussed in chapter two, feelings of shock and uncertainty can evoke a sense of crisis, and this sense in turn creates the sense that policy should be re-evaluated and, potentially, changed. In order to re-evaluate, clearly, there would have to be sufficient *capacity* to do so, something found lacking in the mid 2000s which, arguably, then led to a further degree of ‘deliberative’ and then also ‘technocratic’ re-politicisation. As such, therefore, re-politicisation can be understood as explanatory of why change took place (cf. Wood 2011).

A return to active political re-engagement with energy was, however, by no means guaranteed to form the root of further structural change. It did appear, however, that some sort of response to the security of supply crisis was understood as necessary, as is evident in the political pressure that was then brought to bear on the DTI, and Ofgem, to “do something” (Interview 15). In that energy policy changed to any particular degree, however, it seemed that this was in response to perceptions of events exogenous to the PEPP. As such much of the focus was on the new International Energy Strategy which the UK was, for the first time, implementing (DTI 2007: 9; FAC 2007). This, and other geopolitically informed policies adopted as referenced in section 3.2 of chapter five, can indeed be better understood within the particular context of the re-conceptualisation of energy as a national security concern, under threat from unreliable foreign suppliers (DTI 2007).

Policies, in particular, focused on actively improving domestic abilities to produce energy and on facilitating further nuclear builds can be related, therefore, to the increasingly dominant explanation of crisis. As such, just as pro-market interpretations of the 1970s economic crisis drove certain specific forms of governance change in the early 1980s, so too can it be argued that the geopolitical interpretation of energy did drive some related policy responses (Hall 1993; Hay 1996). It is this set of policies, aimed at improving supply security by facilitating domestic production, that proved to have staying power, as seen in chapter six. This falls more convincingly in line with the notion that narratives can inform solutions (Hay 2001; Blyth 2002), and that ‘speaking security’ can encourage realist responses from the state (cf. Waever 1995).

However, in that some of the new geopolitically informed policies adopted in response to perceived threats from abroad were received with a high degree of scepticism within some quarters of the DTI and Ofgem this suggests faith in the ability of traditional geopolitical solutions to provide any kind of long-term solution was at this stage relatively low. Protectionist policies had been generally discredited over the previous few decades given the dominance of ideas about free trade and positive economic interdependence. This would apply particularly to ‘institutionalised subjects’ within the DTI and Ofgem (cf. Hall 1993; Campbell 1998). What seems to have occurred, therefore, is that although the dominant explanation of the crisis did drive some lasting solutions, it did not contribute at this stage towards the adoption of a cohesive and credible alternative framework of ideas for governing.

Given also the lack of critique of the PEPP inferred in the actual version of the geopolitical narrative which dominated, with its focus on exogenous energy problems, there was less impetus to change the underlying structure of energy governance. With the focus on foreign actors UK energy policymakers, and their decisions, were not held up, at this stage, as being responsible for the contradictions and anomalies. As such the market framework was not being specifically challenged and was not, at this stage, widely perceived as necessarily less legitimate.

2.3 Public Interest and Political Action

If the way in which a crisis is narrated, in this case as a security of supply question at a time of uncertainty, could lead to a degree of renewed state interest then implicit in this is an assumption about interconnections, in a democracy, between public awareness and political interest and involvement. Some reference was made in chapter two, section 4.1, to arguments that an inter-subjective relationship exists between publics and political possibility (Widmaier et al 2007: 755) and to the concept of securitisation inferring that wider publics matter in processes of breaking with ‘normal’ politics (Buzan et al 1998).

Chapter five has suggested that fears about Russia, in particular, and its ability to affect supplies combined with interest in energy security as a subject struck a chord with wider publics, and political elites, in the UK. This narrative, as such, can be described as cognitively convincing and as being able to tap into a high degree of inter-subjective meaning in the UK (cf. Yee 1996: 90-91; Geddes and Guiraudon 2004: 335; Schmidt

2006: 252; cf. Kern 2009: 49). Certainly both ideas were underpinned by perceptions, of the Cold War and of energy supplies as subject to threat, which had been dominant at various stages throughout the 20th century. Furthermore, in that attempts to securitise climate change had not been met with much widespread, public support in the UK, given the relative popular and political success of the notion of energy supply insecurity, this suggests that securitisation is to some degree, as suggested in chapter two, referent object specific (Buzan et al 1998).¹⁴⁶

Colin Hay is also quite specific about public awareness within processes of profound structural change in his claim that they are generally associated with “...highly politicized and public debates...”, at times of perceived crisis (Hay 2001: 200). Hay goes on to suggest that, in the event that contradictions and failures are not publically perceived it is more likely, as had been the case with the PIU review in 2002, to be dealt with within the terms of the existing paradigm (Hay 2001: 200). The relative lack of widespread public involvement in debates about energy and climate change in the early 2000s can, in addition to concepts of embedded policy paradigms, provide part of a plausible explanation as to why relatively little change occurred at that time.

The degree of public engagement with energy as a security issue, however, has been identified in chapter five as an important factor in terms of initiating the processes of ‘deliberative’ repoliticisation and ‘re-think’ in energy. One example was the degree to which energy started to be deliberated and discussed in political circles, and outside of ‘expert’ communities at this stage (Fox 2006; House of Commons 2007a). The degree of inter-subjective meaning underpinning notions of Russia as threatening and energy supplies as valuable arguably assisted in connecting public awareness with political interest. If, in turn, we apply Hay’s concept of politicisation as placing a subject into the realm of contingency and deliberation then that subject, energy in this case, and the way it is governed, is likely to become more open to scrutiny and question (Hay 2007: 79). This is particularly, as seen in chapter six, in the instance that anomalies continued to exist and that policy became increasingly understood to be failing to deliver objectives.

¹⁴⁶ It might also be suggested that energy security, in that it represented near-term, national threats was more tangible to a wider range of people.

What is not claimed here, however, is that growing public and political engagement with a subject as a rule leads to paradigm change, but that in this instance it did enable the start of a process of ‘re-thinking’ energy governance. Certainly interviews undertaken within the DTI and Ofgem have pointed to growing political involvement, in the form of direct political pressure, starting to impinge on energy governance processes (Interview 2, 5, 15).

2.4 ‘Re-Thinking’ Energy and Change as Process

Findings here about the process of ‘re-thinking’ suggest a further slowing down of, and layer of complexity to, processes of structural change than more usually observed (Hall 1993; Hay 2001; Blyth 2002; Greener 2002; Oliver and Pemberton 2004). What can be drawn from the analysis in chapter five is that the process of ‘re-thinking’ energy governance did continue alongside other processes of consistency and change. It seems that this process was of particular importance in renewed attempts to understand what was happening in UK energy governance in the mid 2000s, but also in linking this period to later changes.

This chapter, above, has already referred to claims that ‘deliberative’ and ‘technocratic’ depoliticisations had resulted in an inability to understand fully the possible implications both of boosting renewable energy supplies for energy poverty and of international energy events unfolding for the UK. A further example takes us back, again, to the 2000 fuel protests. It appears that neither the Prime Minister, nor “...anyone else in a position of authority...”, was aware that UK petrol stations need re-filling every 48 hours (Blair 2010: 292). Therefore when refineries were blocked and no petrol flowed, and stations do not keep reserves, there was a considerable impact. Clearly, given that the refineries were being picketed this piece of important information about how the UK’s energy infrastructure works might have been vital to stopping the impacts of the pickets earlier. This mini-crisis did, however, serve as a brief reminder of the links between public interest in energy and the price of petrol (Blair 2010: 292-3). These examples tell us something specific about the ability and capacity of systems characterised by ‘technocratic’ and ‘deliberative’ depoliticisation to react to crisis and to enact and manage change.

It took a great deal of effort, in the mid 2000s therefore, to re-engage actively with and understand energy once more, further affecting the degree of uncertainty being

experienced. One catalyst for the ‘re-think’ of energy can be found in the mounting realisation that current Government capacities in, and understandings of, energy appeared to be incapable of explaining and reacting to emerging events. The first steps in this process were the plethora of new energy documents including yet another Energy Review and White Paper, the new DTI mandates for regular reports to Parliament on energy security and climate issues, and the devising of the first International Energy Strategy (FCO et al 2004; DTI 2005a, 2006a and 2006c; DTI 2007). The scale of policy documents produced at this time is taken to be further evidence of a process of ‘deliberative’ re-politicisation and ‘re-think’. Furthermore capacity was being added within the energy divisions of the DTI and the FCO to provide more analysis and to contribute to, and frankly enable, the process of ‘re-thinking’. At this stage, however, technocrats were still largely responsible for analysis and solutions, just more of them.

The House of Commons special report on energy security (House of Commons 2007a), commissioned by a new committee established for this purpose, is however a different example of the ways in which the governance system was trying to come to terms with this baffling and uncertain area. This, in addition to other reports assessing and questioning climate policy (SDC 2005; House of Commons 2007b), indicates a broadening of the debate away from technocrats and growing possibilities for external scrutiny of existing governance frameworks. This is significant given Hall’s assertion that change is more likely to come from outside those communities directly engaged in policymaking and, as such, this active political re-engagement might also help to facilitate the production of new ideas about how to proceed (Hall 1993: 290). The emerging notion that a ‘re-think’ was required was opening up this area of governance to more debate and to possibilities for a different range of voices to be heard.

If we accept, in line with Hay’s views, that politicising a subject can be positive, in that deliberation can be understood as providing for more informed agency and in that social interaction can assist in accountability, then ‘re-thinking’ energy could also provide for improved governance (Hay 2007: 67-68; cf. Higgott and Erman 2010). Certainly, as we saw in chapter six, political re-engagement on a more committed basis did assist in the process of coming, eventually, to understand more about the breadth and depth of problems facing UK energy. The central role of ‘re-thinking’ energy policy might also provide an answer as to why ‘speaking security’ might result in deliberation rather than

‘secretive’ depoliticisation. We will return to this potential link in the concluding chapter.

3. Unravelling Ties: 2007-10

In analysing in more detail some of the observations made in chapter five about UK energy governance from 2004 to 2007 some suggestions were made about ways in which ideas and institutions have constrained, facilitated and influenced change. This section, with reference back to chapter six, will offer more answers to questions about *how* policy change takes place, what the drivers were and which actors were involved. The above section has already briefly considered the importance of time in processes of change particularly with the inclusion of the notion of ‘re-thinking’ energy, and its role in unravelling depoliticised governance structures. What becomes more clear as the analysis in chapter six progresses is that time is not only important to understanding this process of change, but it may also be important in assessing the degree to which the widely perceived energy crisis provided suitable conditions for change.

Section two has suggested that although there was a widely accepted crisis narrative that impacted upon public and elite political thinking, it did not appear to provide a systematic and credible framework for change. Never-the-less chapter six did claim that a certain degree of structural change had taken place, to each level of the PEPP, by the end of the first decade of the 21st century. This section will consider in more depth the role of other crisis narratives within the changes observed, how particular narratives presented evidence of failure and drew upon the sense of energy crisis, and what other solutions were offered. All this points to interconnections between the mounting sense of uncertainty and security crisis in the mid-2000s and later changes, but also to a long, drawn-out, messy and contested type of change. In addition, it also points to a governance system which, although altered, still left the UK with a degree of uncertainty as to the future of energy governance, in stark contrast to new institutionalist understandings of re-imposed certainty post-paradigm shift (Hay 2001; Blyth 2002).

3.1 The Energy Security-Climate Narrative

What seems to emerge from the analysis in chapter six is evidence of the role, given the right circumstances, of narratives as political agency within processes of change (cf.

Yee 1996; Bulkeley 2000; Geddes and Guiraudon 2004; Schmidt 2006; Hajer in Kern 2010: 30 and 49). At the end of chapter five a situation had been reached wherein recognition was mounting of a need to act, but this was, importantly for processes of structural change, in response to factors perceived as exogenous to the PEPP. As such the security narrative had highlighted a possible lack of UK, and OECD, energy security but not problems inherent within the pro-market system of governance. A number of geopolitically informed policies, related to the crisis as perceived, were pursued to address these exogenous problems but energy security was still understood to be a function of freely trading energy markets (FCO et al 2004; DTI 2006c and 2007).

The narratives identified at the start of chapter six, however, not only attempted to claim that existing governance was failing to meet new objectives, but that the PEPP itself was partly to blame. Collectively the geopolitical and climate narratives had been providing proofs of failure to meet both security and climate objectives for some time, and by the end of the 2000s these proofs were mounting. Furthermore, given renewed governance efforts in 2003 and 2007 to address these problems by using existing institutions of governance, such failures could be increasingly interpreted as attributable to the PEPP and its reliance on 'pro-market' structures.

The field for energy debate had arguably also been opened up by the energy security crisis in the mid 2000s, and this did allow new voices, and evidence of failure, to be voiced outside of previously limited circles and by political elites. The 're-think' of energy governance, and emerging realisations of the extent of the problems, had left various actors and institutions looking for solutions. In the absence of the energy security debate it is harder to conceive of how energy would, to the same degree, have come to be understood as an area of national interest once more. The question of national interest is important here to the degree that the re-framing of energy as a national question can be seen to require centralised, or state, answers (cf. CEPMLP 2006; Wicks 2009). This brings us to the role of the energy-security-climate narrative within this process of change.

Given the high and continuing degree of scepticism in the UK about man's role in climate change referenced in section two above (cf. BBC 2010; Niblett 2011), and the contrasting effectiveness of the way in which climate narratives drew on national security concerns to boost the solutions they offered, we might be able to learn

something about political resonance. Although, as will be argued below, legally binding climate objectives might in and of themselves have driven energy governance change, the re-focus within the UK on energy as also requiring action on a national scale provided an additional boost to climate solutions. As such the energy-security-climate narrative embodied and encouraged an emerging recognition of what Blair referred to as the “...two immense challenges...” facing our country (DTI 2006: 4).

This narrative, however, not only helped to re-frame the understanding of the crisis – as a joint energy and climate crisis – but it also offered up both evidence of failure as well as climate policies as solutions to energy security and climate problems. This represents an about-turn from the dominant PEPP narrative, evident still in the 2007 White Paper, whereby the market-based approach and competition, the panaceas for energy security, were still also understood to be the principal routes for producing climate outcomes (DTI 2003, 2006a, 2006c and 2007; JESS 2006). The geopolitical narrative of secure national energy systems, in order to avoid “unstable foreign suppliers”, requiring more domestic production seemed, however, to have found a high degree of political purchase (IPPR 2007; DTI 2007; House of Commons 2007a; FAC 2008; Wicks 2009; DECC 2009c). And it was this political purchase that the energy-security-climate narrative continued to build on in putting forward renewable energy as part of the solution.

Furthermore, importantly, by providing evidence of the degree to which renewable energy had been underinvested, and to which it was under-represented in the UK energy mix, a strong argument could be built that further change would be required to fulfil the potentially positive roles of renewables and energy efficiency (Mitchell 2008; ITPOES 2010; WWF 2010). This narrative was still one, therefore, of policy change to meet climate ends, even though it increasingly drew on ‘traditional’ security understandings of energy and on proving policy failure. If we consider, however, that governance changes ultimately made were least profound at the level of ideas about energy governance, then the element of these narratives which sought to discredit market ideas can be seen as having been less effective. The background to energy debates by 2008/2009 was one wherein a wider discrediting of market ideas might have been possible due to the financial crisis but again, here, challenges were not entirely successful either (cf. Gamble 2009; Hay 2010).

We can observe, therefore, inter-relationships between various aspects of the process of change thus far. We can follow a thread of narratives about energy independence from the mid 2000s, when they were used to recommend geopolitical solutions to perceived energy security problems, through their adoption within climate narratives, on to their inclusion within distinct political narratives, such as that of Malcolm Wicks (Wicks 2009). Wicks, as such, might have served as a political mediator for the ideas of the climate-energy narrative, ideas which might previously have been marginalised under the PEPP (cf. Schmidt 2009: 3). Ultimately, as referenced in section 4.1 of chapter six, the narrative of self-sufficiency did come to form a lasting underpinning for a range of new renewable and nuclear policies in 2009, in that they are not only climate friendly, but also boost ‘home-grown’ energy (DECC 2009b: 10).

The way in which this narrative became woven into political discourse and policy documents can provide us with further evidence in support of claims about the degree to which ‘speaking security’ can be understood as politically salient. The notion of defending domestic energy production in the face of foreign threats seems to have underpinned, in addition to the process of re-thinking energy mentioned above, both a process of narrative appropriation and elements of energy governance change. This suggests, at least within the UK, that once a subject can be understood in *national* security terms it can raise its public and political profile leading to possibilities for political action.¹⁴⁷

We can also start to understand more about the role of narratives in that they too can be understood as inter-related. In that climate narratives adopted, but also importantly then adapted, elements of geopolitical narratives this suggests, as mentioned in chapter one, that narratives are neither static nor can they be understood as representing cleanly delineated perspectives on energy. As such, in combination, these narratives provided an emerging understanding of the crisis, renewed emphasis on particular solutions as able to meet twin objectives, whilst also offering up a critique of current methods of seeking to provide solutions within the PEPP. In this way narratives seem to have played a role similar to that suggested by new institutionalists in chapter two but, again,

¹⁴⁷ This relates to arguments put forward by Chris Brown, in a critique of Ken Booth’s cosmopolitanism, that appeals to localised and recognised communities can be more tangible and effective than appeals to broader swathes of society (Brown 2010).

in a messier and more drawn-out way (cf. Stone 1988; Hay 1996 and 2001: 94; Wilson 2000; Blyth 2002; Widmaier 2007; Widmaier et al 2007).

3.2 Other Drivers of Change

Mounting evidence of failure to meet climate objectives over time was accompanied with a sense that other institutions would need to change. Although it had been claimed earlier that the institutions of governance need not change to meet new objectives (DTI 2003), by 2008 a clear overhaul of the physical institutions of energy governance was taking place. Arguably, given the growing number of un-answered questions about energy governance, and its role in delivering climate objectives whilst maintaining supply security, the DTI and Ofgem had begun to lose their right to self-refer over time. The PEPP was further undermined, as suggested above, by the unsuccessful commitment of old policies to new objectives, objectives which had in any case been resisted to a certain extent by policy-making teams. Not only were the DTI and Ofgem seemingly unable to offer alternative and credible answers to mounting evidence of failure but the sheer scale of policy documents, White Papers, Acts and Bills of Parliament, each representing a new iteration of policy, hints not only at the lengthy process of 're-thinking', in that new problems were constantly being perceived, but also at a continuing sense of uncertainty.

As already suggested in chapter six the creation of a new government department dedicated to energy and climate governance reflected the degree to which energy had become re-politicised and re-conceptualised but was also claimed to reflect the further coming together of climate and energy narratives about energy governance (DECC 2010). DTI economists were thrown together with the "woolly" DEFRA climate teams and instructed to work together to solve climate and energy problems (Interview 5). This move is understood here as evidence of a loss of faith in existing institutions of governance as well as reflecting the institutionalisation of the longstanding climate idea that energy and climate policy should be treated, in active political terms, as completely inter-related (Carter 2001; PIU 2002; Held 2006; Greenpeace 2006; Giddens 2009; Scrase et al 2009).

New institutions, however, do not necessarily imply profound changes in governance. One clear example of this had been the Joint Energy Security of Supply working group (JESS) formed in the early 2000s (cf. JESS 2002). This group had been tasked with

assessing implications for UK energy security given the imminent switch to importer of oil and gas. Being as it was, manned by existing personnel from the DTI and Ofgem, conclusions reached followed largely in line with those already discussed in policy documents (JESS 2006). Although many disenfranchised civil servants did leave both DECC and Ofgem around this time these institutions did maintain a core of the old personnel who had operated under the PEPP for substantial periods (Interviews 2 and 15).¹⁴⁸ As such dominant narratives associated with the PEPP did not disappear in that although pressure was being felt to change contestation about the requirement to depart from the PEPP also persisted (Interview 15).

As noted above, in section one, what had been significant both in how the energy division of the DTI and Ofgem operated were factors such as overall institutional mandates, personnel employed and their educational and training backgrounds, and their hierarchical position versus other departments of government. Changes observed in chapter six, therefore, in mandates for Ofgem and the movement of responsibilities away from Ofgem, the independent regulator, back to DECC did add to a profile of more profoundly shifting institutions (DECC 2009c). A combination of new institutional mandates, more alternative institutions, such as the Committee on Climate Change (CCC) and the House of Commons Committee on energy security (House of Commons 2007a) among others, meant that by the end of the decade DECC and Ofgem personnel were noting the degree to which they now felt more politically implicated in their decisions (Interviews 15 and 16). This feeling might well have been enhanced by the newly mandated requirements to report annually to Parliament on energy security and climate change progress.

The changes to physical institutions of governance referenced above, and at greater length in chapter six, are taken here to represent a reasonably high degree of reversal of ‘technocratic’ depoliticisation. By 2010 energy policy-making processes were less distanced from central political processes, more subject to deliberation at Cabinet and Parliamentary levels, and subject to more formalised and on-going scrutiny via new institutions. As such the ‘deliberative’ repoliticisation and ‘re-thinking’ of energy, in addition to mounting evidence of failure, are understood here to have been partly

¹⁴⁸ Also tells us something about lenses – for those who felt a requirement to leave DECC/Ofgem there was clearly a consideration that the intellectual integrity of energy governance was being challenged, however others expecting more radical change consider this to be just a small step change?

responsible for some reasonably profound institutional changes and reversal of ‘technocratic’ depoliticisation. In this way these processes are taken here to have been fundamental to this particular process of change.

As well as changes to the physical institutions of governance chapter six traced closely the way in which climate objectives had developed from vaguely worded targets, which were not necessarily taken as strictly binding, to legally binding, specific targets including for renewable energy (HMG 2008a). These new objectives themselves are taken here to have facilitated other institutional changes. It was noted in chapter one that one of the most prominent academics on the question of energy paradigm shift in the OECD, Dieter Helm, had concluded that a policy paradigm shift had already taken place. This seemed based largely on the observation that the objectives of energy policy had changed, from that of creating liberalised and competitive energy markets to that of achieving climate and energy security targets (Helm 2005a and 2007a).

Although this thesis on the whole disagrees with Helm’s conclusions, not least in that no policy paradigm shift is claimed here, it is worth analysing the role of objectives more closely particularly as Hall’s ‘third order change’ has highlighted objectives as being of primary importance to measuring change. Hall had considered that ‘goals’, or objectives, guide policy and as such, third order change could not be considered to have taken place without a new direction for policy (Hall 1993: 279). Helm likewise seems to infer that ideas about governance would change in response to new objectives and instruments (Helm 2005a: 1). Neither, however, breaks this relationship down into any particular detail.

On the evidence of chapter six, however, a case could be made that new objectives of energy policy, especially once understood to be ‘serious’, did drive further questioning of energy governance structures and a search for new solutions (see also Kuzemko 2012 forthcoming). As an example we can turn to the Climate Change Act of 2008 wherein for the first time specific climate targets became legally binding and budgets were set across government. What was just as significant, however, is that this Act laid down a specific challenge for energy policy-makers - to start finding specific policy solutions to meet the new targets (House of Commons 2007a; HMG 2008a). The combination of legally binding targets and the challenge to be specific about how to meet them arguably forced the hand of policymakers and took energy governance beyond target

setting exercises. Again the role of those new institutions and opposing political groups in continuing to scrutinise achievements and point to policy failures were also important in keeping the ball of change moving.

The challenge of how to deliver new objectives was picked up in 2009 in the ‘UK Low Carbon Transition Plan’ and the ‘Renewable Energy Strategy’, both of which recognised the need for further governance change (DECC 2009a and 2009b). It is within these documents that we can see a more concrete move towards direct state involvement in governance processes through legislation, financial support mechanisms, the ‘feed-in-tariff’ and more new and specific institutions among others. As such these solutions, many suggested within climate narratives, do represent the instruments of governance breaking further with the market-orientation of the PEPP and reflect also a new degree of determination to meet objectives. In this way objectives to which policy is set, or direction of policy, is understood here as being a specific driver of change not just a way of measuring whether change has taken place.¹⁴⁹

3.3 Necessary Conditions for Paradigm Change

In the first chapter of this thesis, as part of the review of literature on energy paradigm change, it was noted that different conclusions have been reached, depending often on theoretical perspective or normative position taken. Amongst those writing specifically about energy policy, some had claimed a full or partial paradigm shift whilst others had referred still to a ‘band of iron’ restricting change to policy (Helm 2005a and 2007a; Rutledge 2007; Mitchell 2008; Jegen 2009; Kern 2009; Rutledge and Wright 2011). Certainly paradigm shift, in that it has tended to be under-theorised in much of this literature, was often not specifically measured, as has been attempted in this thesis by looking at change to the five identified levels of the existing paradigm. However, although a number of important structural changes were observed, in chapter six, to four levels of the PEPP the conclusion was that paradigm shift could not be claimed. This can be attributed to a number of factors, some of which will be discussed here below, but it also raises questions of other necessary conditions for paradigm change beyond the measurement process adopted here.

¹⁴⁹ As suggested in chapter one, some recent research has suggested that, on a global basis, the state has become more involved in the energy sector in order to attain energy security and climate objectives (Froggatt and Levi 2009: 1129).

Before moving onto a discussion of necessary conditions for change to be considered successful under the theoretical framework used here, it might be worth commenting that perceptions of change can also be coloured by normative positions taken. Just as we have tried to measure change in UK energy governance by comparing the five levels of the PEPP between 2000 and 2010, change might also be measured by looking mainly at the end governance position. For a more ‘radical’ analyst recommending paradigm change based on a specific vision of what the new system might look like, changes thus far might seem paltry. This might apply to those who had expected a higher degree of direct state investment, the setting up of a ‘single buyer’, or even those who are still arguing for a rejection of the current industrial paradigm (Bernstein 2001; Carter 2001 and 2007; Mitchell 2008; Scrase et al 2009; Newell and Paterson 2010). For those, like Helm, who come from more of a classical economics background changes made thus far might already seem like a genuine structural shift. Specifically in the case of Helm he, like Hall, expects any new paradigm to be coloured and shaped by the previous paradigm. As such his claims of paradigm shift, whilst at the same time seeking ways to marry up “...the new objectives with the liberalized markets”, might not seem like such a contradiction (Helm 2007a: 32). For others the current position in the UK might still be more akin still to Bernstein’s ‘liberal-environmental’ compromise (Bernstein 2001).

This relates closely to the question of ideas and their role in paradigm change. Chapter six had suggested that the PEPP level least affected by change had been that of ideas about energy governance in that they had not been convincingly discredited. It appears that specific arguments offered by climate and geopolitical narratives about the market model itself being at fault were never really taken on board. This might partly have to do with the nature of the dominant crisis narrative which laid the blame on external circumstances, the unstable foreign suppliers and the changing climate, rather than suggesting that the PEPP might have exacerbated these situations. The lack of rejection of such ideas contrasts with the way that many new institutionalists have pointed to a very specific discrediting of Keynesian economic management as part of the economic policy paradigm shift of the 1980s (Hay 1996 and 2001; Blyth 2002; Oliver and Pemberton 2004).

Lack of comprehensive discrediting of part of the previous ideational framework might also be connected with a perceived lack of systematic and credible alternative

framework which could address the crisis. As it happened a number of solutions had been drawn from within climate narratives, and also some informed by geopolitical thinking, but this seems to represent a ‘pick and mix’ process which, in turn, might also represent the rather ‘mixed’ explanation of crisis. This is particularly in that the crisis came to be understood within energy policymaking and wider political circles, from 2007 onwards, as a joint energy security and climate crisis.

Again, if we compare this process of change to the paradigm shift observed by new institutionalists in the early 1980s there are some distinctions in the way in which the dominant narrative is understood to have facilitated change (Hall 1993; Hay 2001; Blyth 2002; Oliver and Pemberton 2004). The 1980s ‘Winter of Discontent’ narrative contained within it a credible explanation of the crisis, as suggested above, but also a coherent and directly related set of solutions, underpinned by neoliberal thinking, about how to solve it. As suggested by Hay, one of the primary drivers may well have been the simplicity of the narrative (Hay 1996, 2001 and 2009). Oliver and Pemberton suggest that “...the triumph of a new policy framework depends... on a workable new idea (or... a set of ideas) being available” (Oliver and Pemberton 2005: 419). Solutions pursued, however, in answer to the perceived climate-energy security crisis were not suggestive of a well-defined, alternative package of measures to achieve the new objectives. As such what seems to have been accepted within energy policy-making communities is a new direction for policy, but no clear and comprehensive understanding of the best way to get there. Hence observations at the end of chapter six that the process of ‘re-think’ continues and of ‘pick and mix’ policymaking which might be comparable to Hay’s suggestion of “inter-paradigm borrowing” (Hay 2010: 22).

The stickiness of pro-market ideas about how to govern energy may also be related to the type of crisis being identified here in that it is one, although inter-related in practice with many other aspects of the international political economy, that is not perceived, yet, as representing a specific challenge to ideas about economic governance. Indeed part of the argument here has been that the perception of crisis was directly linked to a feeling that the pro-market system of energy governance adopted and advocated by, and in some ways defining, the UK was under threat. It might be somewhat ironic if, in attempting to defend the system, it were to be rejected completely. This tells us something, in turn, about the importance of the interpretive framework in defining the

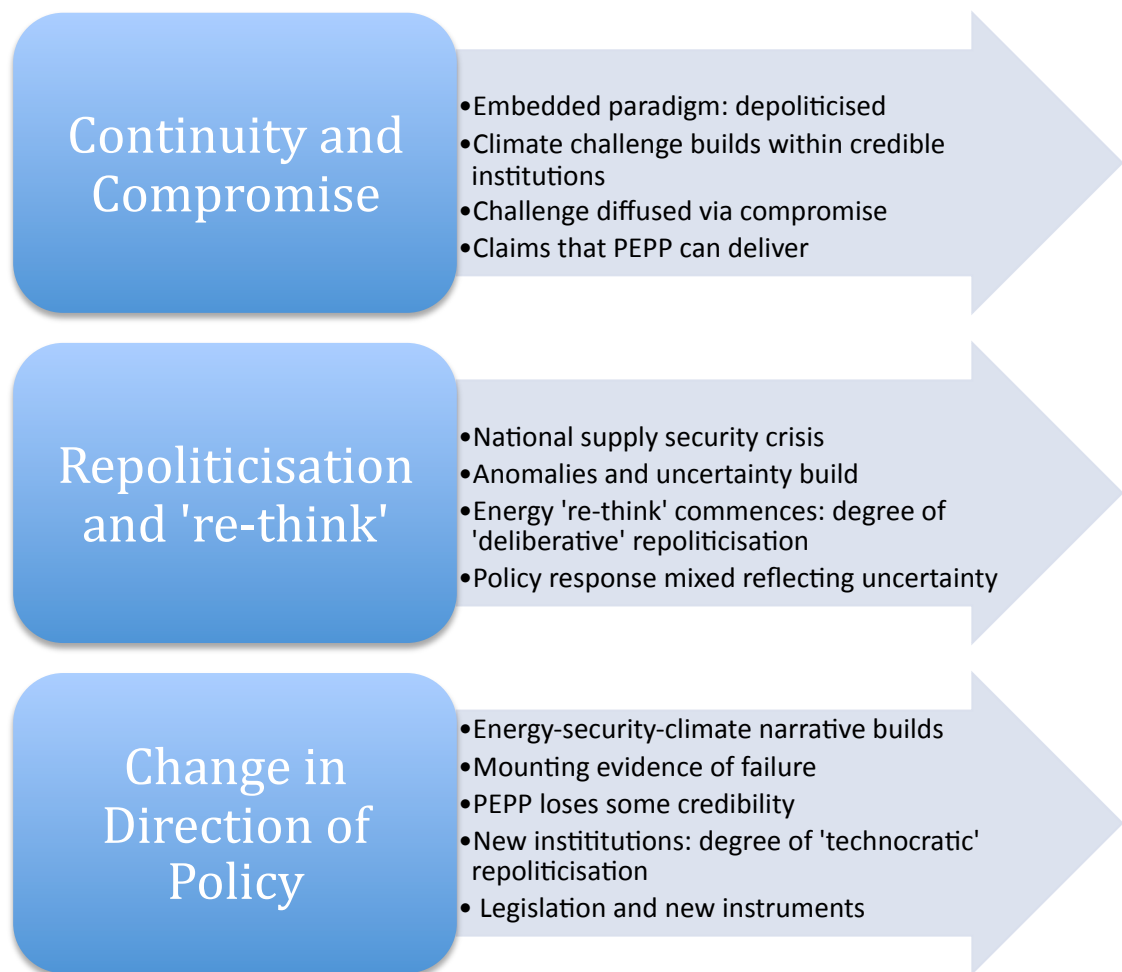
PEPP, as *pro-market* energy policy paradigm. In the 1980s when the PEPP was being implemented it was done as a process of turning pro-market ideas into political practice via the creation of new structures of governance.

Lastly, although the evidence collected in this thesis, and the interpretation thereof, may not qualify for policy paradigm change clearly some important structural changes have taken place. This begs questions about how to measure varying degrees of change and processes of shift which fall outside of paradigm shift. In terms also of the temporality of change a likewise mixed and complex picture has emerged. Governance change suggested here finds itself neither completely in the camp of a gradual or evolutionary process (Mahoney and Thelen 2010), nor, indeed entirely of a process of punctuated evolution (Hay 2002). The findings of this thesis support claims by Mahoney and Thelen that change can take place in many ways – linear and progressive, evolutionary but punctuated, and suddenly.

Conclusions

This chapter, in reflecting in some more depth on the various iterations of change over the course of the 2000s, has tended to highlight that the process has been complex, messy and, arguably, on-going. In taking new institutionalist concepts of paradigms and change and applying them to UK energy governance it appears that ideas have, indeed, both constrained and facilitated structural change, with the emphasis perhaps still in this instance on constraint. An attempt has been made here to not only monitor and track changes but to also understand how and why they came about. Table five, below, is an attempt to provide a summary of these changes in a more accessible format and although it does provide a glimpse of the complexities involved it does underplay the inter-connections between various elements of change. This is something which the concluding chapter will seek to address, along with a deeper consideration of the implications of this research for concepts, of paradigms, change and depoliticisation, and for understandings of UK energy governance.

Table 5: Processes of Energy Governance Change: 2000-10



What seems apparent is that thinking about UK energy governance in terms of policy paradigms and depoliticisation has helped to explain in more depth the difficulties associated with large-scale structural change. This is particularly given the degree to which dominant pro-market ideas had both influenced the formation of the PEPP and had become embedded, specifically via 'technocratic', 'deliberative' and 'marketised' depoliticisation, over time. 'Secretised' depoliticisation has not featured as heavily in these explanations given the extent to which it was not a feature particular to this model of energy governance. This chapter has also, however, argued that the ways in which the PEPP operated contained the seeds of its own unravelling both in terms of throwing existing policies at new problems and, particularly, of the extent to which the UK had lost energy governance capacity and understanding. A lack of capacity to think beyond the ideational framework arguably led to a compromise position which did not, ultimately, prove successful.

Utilising concepts of paradigm change together with considerations of the roles of widely perceived crisis, of 'speaking security', and of narratives pointing to policy failure has assisted in eking out understandings of why and how changes have taken place. The acceptance within policy-making circles of a narrative about sustainability and national energy security has not, however, resulted in a full return to conditions of certainty. The 're-think' of energy-climate governance is ongoing and the opportunity for inconsistencies to continue between objectives and outcomes is, arguably, high. As such, instead of identifying a process of paradigm change what this thesis may have found might be more accurately described as an evolving process of structural change.

Thesis Conclusion: Questions, Answers, Concepts and Possible Futures

Introduction

This concluding chapter will briefly look into some of the implications of the findings of this thesis for the ways in which we can understand UK energy governance today as well as for the literature reviewed in chapter one. It will do so principally by summarising, in brief, the answers to the four questions raised about UK energy governance in the introduction to this thesis. These summary answers will be produced here only briefly in order to avoid unnecessary duplication with observations already made in each chapter. This conclusion will, however, also eke out further implications for those theoretical concepts, policy paradigm theory, ‘speaking security’, and de- and repoliticisation, which have largely underpinned the framework of analysis used here. Some attempt will be made to identify the ways in which those concepts, some of which have emerged from different disciplinary backgrounds, conflict and inter-relate with one another, as well as complement each other.

It is this theme of challenge and ongoing uncertainty that will underpin the final section of this concluding chapter. One of the drivers of change highlighted within this thesis has been the way in which alternative narratives have challenged ‘business as usual’ in energy. Their challenges were given considerable assistance, however, with the advent of publically perceived energy security crisis and growing deliberation about energy, a widening of the energy debate and growing awareness of failure of existing policy to provide for the new objectives. All of this was, in turn, underscored by the continued failure of PEPP policies to provide working solutions, despite strong claims by policymakers that competition and markets would provide for energy security and renewable energy. Such conditions for change are, arguably, still in place in UK energy and climate governance and might provide, as discussed in more length below, incentive for further, broader change in the future.

1. Answering Questions and Conceptual Implications

This thesis has set out to answer some specific questions about UK energy governance change, not just in an attempt to address inconsistent conclusions within the literature on energy paradigms and change, but also because the UK has been one of the strongest

proponents of pro-market energy over time. The ongoing changes in UK energy institutions and policymaking may impact upon the notion of pro-market energy as ‘orthodoxy’, or as an accepted logic or norm. Given the degree to which the UK has based its external relations on successful norm diffusion (Davies 1996; Helm 2003; Timmins 2006; see also Watson 1999), this is likely to have specific implications for relations with producer states such as Russia. Change to the PEPP would also have relevance for those countries, and regions, who had chosen to attempt a re-structuring of their own energy governance systems using the UK governance system as a ‘model’, as suggested by the IEA (IEA 2006; see also de Oliveira and McKerron 1992; Thomas 2006).

As a reminder, the four questions posed in the introduction to this thesis were:

- Has UK energy governance undergone a *profound structural change*?
- What *type* of energy governance system existed at the start of the period of analysis?
- *Why* is UK energy governance changing, what have the catalysts for change been?
- *How* do processes of change unfold?

The answers to these questions will form part of the sub-sections below, and will also be related back to the literature reviewed in chapter one. Answers to questions will also be intertwined with an explanation of how they were reached and which aspects of the conceptual framework were most useful in allowing answers to be reached.

As suggested in the thesis introduction, the conceptual framework of analysis adopted here has ranged across new institutionalisms, but with an emphasis on ideational institutionalism, concepts of depoliticisation as well as Copenhagen School, and more critical, approaches to securitisation. As such the framework has, in Hall’s words, “...borrowed from multiple schools of thought...” (Hall 2010: 220). The conceptual framework has been utilised in order to structure this thesis on UK energy governance as well as to answer specific questions about how, why, to what degree change has been taking place. As such, the intention has not been to form a new and generalisable concept to account for both consistency and change, but to provide contextual and lasting explanations.

It has been suggested that there is an inevitable tension between a requirement to develop the relatively simple models that form the substance of social science and a need to portray the world in realistic terms (Hall 2010: 219). By erring more on the side of being overt about the complexities and the messiness of the processes of change being undergone within UK energy governance this thesis has, perhaps, been more about portraying the world in “realistic terms”. That is not to say, however, that no conceptual observations can be made as a result of this study. In fact, by borrowing from a range of different conceptual areas, although there have been some contradictions, some innovative and complimentary inter-relationships have also emerged which are worth identifying and analysing here.

1.1 Defining and Measuring Change

As suggested in the thesis introduction, the principal question that this thesis set out to address has been whether or not policy paradigm change has occurred. In order to provide a sufficiently plausible answer to this question this thesis has further argued that energy governance at the starting point, 2000, must be defined in detail in order to have a marker against which to measure change. The ability to measure has been considered important given the degree to which energy paradigms have been under-defined within the relevant literature, reviewed in chapter one. Arguments that energy policy has undergone a paradigm shift (Helm 2005a and 2007a) as opposed to those that argue that UK energy policy remains profoundly constrained (Rutledge 2007; Mitchell 2008; Kern 2009) are hard to assess given the lack of precise definition of what change or stasis actually means within the terms of each analysis.

Chapter two built upon Peter Hall’s concept of policy paradigms in order to develop a detailed understanding of energy policy in 2000, which was characterised as a ‘pro-market energy policy paradigm’ (PEPP) (Hall 1993; cf. Wilson 2000; Hay 2001; Greener 2001; Blyth 2002; Oliver and Pemberton 2004; Gamble 2009; Larsen and Andersen 2009; Chwioroth 2010; Wood 2011). Inspired by Hall’s separation of policy into three components (Hall 1993: 278), the PEPP was constructed as consisting of five separate, but inter-related, levels. Identifying these levels has provided the thesis with the possibility for a detailed mechanism for measuring change. Governance change could be measured by analysing whether any changes were apparent in 2010 versus 2000, but also in terms of the degree of difference. As such this mechanism of measuring change has also allowed for analysis of the depth, or profundity, of changes

in that a marked shift against *all* levels of the PEPP would qualify as a paradigm change.

The question of depth of change has been important to cover in that a policy paradigm change, as explained and explored by new institutionalists, implies that a significant shift, or break, from past policies is experienced. Use of the term paradigm shift with reference to energy, as suggested in chapter one, seems more emblematic, or symbolic of something important and worth reading about, rather than as clearly understood or defined (cf. Helm 2005a and 2007b; Jegen 2009; Froggatt and Levi 2009). What this symbolic use of the term ‘paradigm shift’ does, however, imply is that the term is broadly taken as having a high degree of inter-subjective meaning attached to it. The clearly defined method of measuring paradigm change, accompanied by the five level characterisation of the existing policy paradigm might be taken as a clear contribution to the literature on energy policy paradigms.

There have been further advantages of the way in which change has been measured here. Arguably, if this thesis had applied Hall’s notion of third order change (Hall 1993), with its more narrow focus on objectives and instruments, then it might not have been able to identify other important aspects of change. For example this thesis would have missed the chance to identify change to the physical institutions of governance which have had such an impact on energy policy outcomes. In addition, however, by including the interpretive framework within the conceptualisation of the PEPP it has also been possible to understand both change, as in ideas about energy, and consistency, in terms of ongoing belief in ideas about the role of the market, of competition and of the need to design economically efficient policy. Arguably, if ideas about how best to govern energy had not been included then this thesis might have concluded that there had been an energy policy paradigm change.

In addition, by avoiding the temptation of forming early conclusions about whether or not profound changes had taken place or about what those changes *should* look like, this system of measuring change has also allowed recognition of consistency as well as alteration. As such, this thesis has set itself apart in that it has considered *both* processes of consistency and change but also in that it has not commenced the analysis with a particular set of ideas about what would constitute ‘best practice’ in mind. Positions taken with regard to energy paradigm stasis or shift have, as argued in chapter

one, often been coloured by normative political positions about how energy should be governed (Carter 2001; Stanislaw 2004; Helm 2005a and 2007a; Rutledge 2007; Mitchell 2008; Klare 2008; Scrase et al 2009).

In terms of further relating the conclusions of this thesis back to the literature reviewed in chapter one it might also be worth highlighting some other differences. Although it has not been possible claim paradigm change this thesis has been able to claim more change than observed by work on UK energy policymaking which emphasised ideas as strongly constraining possibilities for change (Rutledge 2007; Mitchell 2008; Kern 2009). On the evidence of this body of work it appears that Mitchell's 'band of iron' has started to unravel, if not perhaps in ways that she might consider either useful or appropriate (Mitchell 2008: 1). This thesis has observed, as of May 2010, new physical institutions of governance, that the state has assumed a more active role in the governance, if not the supply, of energy and that energy policy is guided by a new set of objectives. In terms of Helm's work on energy paradigm shift in OECD energy policy this thesis suggests some similar kinds of change, most particularly in the form of new policy objectives, but also some other ways in which governance is changing (Helm 2005a and 2007a; cf. Jegen 2009). Again, the formation of DECC and other political institutions for the purposes of governing energy and climate policy might not have been what Helm had envisaged, given his suggestions of more rather than less statutory independence for such institutions (Helm 2007a: 33).

To the degree that it is possible to identify new and alternative ways of thinking about and governing UK energy it would be to suggest the emergence of an energy-security-climate nexus as governance norm. This new norm has been proposed here as being a reflection of the idea that energy and climate policy should be intertwined in a policy-making sense as each can have such strong consequences for the other. It was argued in chapter six that the Department of Energy and Climate Change (DECC), were formed to reflect this idea, long discussed within climate perspectives (Carter 2001; PIU 2002; Held 2006; Greenpeace 2006; Giddens 2009; Scrase et al 2009).¹⁵⁰ Working assumptions about the ability of domestic renewables and energy efficiency to meet both energy security and climate objectives is another sign of this nexus in practice.

¹⁵⁰ Similar changes are ongoing within the US Department of State where climate and energy foreign policy units are being amalgamated (Conversation 5).

Observations made here about the emerging energy-security-climate nexus represent one more aspect of this thesis which sets it apart from other works on energy governance. Much analysis has been undertaken on energy or climate policy as separate policy areas. As suggested in chapter one, within the more recent literature on energy, that considers overtly the politics of energy, there has been tendency to emphasise two models of governance based on geopolitical or neoliberal ideas (Correlje and van der Linde 2006; Finon and Locatelli 2008; Youngs 2009; Luft and Korin 2009). This arguably under-represents the influence of climate ideas within energy governance practices today. In addition, as already referenced, much climate policy literature has suggested that energy and climate policy *should* be inter-connected in political practice. By suggesting the kinds of connections starting to unfold in policymaking practice between these two formerly discrete policy areas this thesis is also claiming that it will become increasingly problematic to analyse energy policy as separate from climate policy. Further reinforcing the energy-security-climate norm.

A second lasting, but closely related, change to thinking about UK energy governance is the positive relationship that is now assumed to exist between domestic, or “home grown”, supplies and energy supply security (cf. Wicks 2009; DECC 2009c). This assumption now so firmly underpins the energy-security-climate nexus that, arguably, without it it could not be claimed that climate policies would result in energy security objectives. The idea that “home grown” is good is not new, it has informed energy policymaking for much of the previous century, except of course in the 1980s and 1990s when very different assumptions were made about what constituted energy security. Clearly, there are those that argue that being over reliant on domestic sources could also lead to supply insecurity (see Jim Watson 2009 and 2010).¹⁵¹ This could take place at times of natural disaster, or of protest, an obvious example being the disruption caused by the refinery pickets of 2001 (Blair 2010). However, it appears that it is now understood that some sort of balance needs to be struck between becoming over-reliant on imports from ‘unstable’ foreign suppliers and becoming cut-off from other supplies in the form of imports in the case of a domestic disaster, such as Japan’s recent earthquake and tsunami. Home grown energy has become a central tenet in providing geographic supply diversity.

¹⁵¹ Current emphasis on boosting domestic production, both from renewable and fossil fuel sources, might be interpreted as British ‘resource nationalism’.

What is lastly worth highlighting in this sub-section on UK energy governance change is the degree of consistency, again, between energy governance in 2010 under New Labour and in 2011 under the Conservative-Liberal Democrat coalition. No changes have been made which indicate movement away on any level of the 2010 governance structure as outlined on table three of chapter six. For example, references to renewable energy and energy efficiency policies serving dual climate and security purposes have remained quite commonplace under the Conservative-Liberal Democrat Coalition Government (HMG 2010: 1, 2011: 3).¹⁵² As is the emphasis on avoiding fossil fuel imports by growing “home grown” supply sources (DECC 2011c: 3), on raised levels of state intervention in energy governance, on facilitating renewables and energy efficiency, and on pursuing a cross-Government management approach (HMG 2011a: 10-11). There remains also, again consistent with the new governance structure under New Labour, a strong narrative supportive of the market’s role in supplying energy, of arguing for the benefits of competition and economic efficiency, even while pursuing the other governance practices mentioned above (cf. HMG 2011a: 16; DECC 2011d: 3).

What is interesting to note, however, is the degree to which uncertainty and the process of ‘re-thinking’ has continued. The new Administration has, yet again, produced a string of documents as well as new legislation, including a new Carbon Plan, another Energy Bill, as well as a new White Paper on how to reform, or even “transform”, the UK electricity market (DECC 2011c: 5; cf. HMG 2011a, 2011b). The substantial proposed reforms to the electricity market, and the debate that has surrounded them, are a clear indication of the process of applying new capacity to deliberating energy producing a much more detailed, but complex and messy picture of challenges facing energy governance. The focus on domestic production remains structured within the energy-security-climate nexus.

¹⁵² A conference organised in April 2011 by the Centre for International Business and Sustainability at the London Metropolitan University, “UK Energy Day”, was focused on promoting awareness of “...the significance of sustainable supply...” within the context of needing to “...balance home-grown energy and energy imports...” to “...address balance of payments...”. See: <http://www.londonmet.ac.uk/lmbs/research/cibs/energyday.cfm>.

1.2 Policy Paradigms, Depoliticisations and Resistance to Change

The difficulty lies not in the new ideas, but in escaping from the old ones, which ramify... into every corner of our minds (Keynes 1997: 384)

An important subsidiary question has been to establish what kind of governance system existed as of the start of this period of analysis, the year 2000. Answers to this question were reached not only by considering the UK energy governance system in 2000, but by looking back at the ideas which had originally underpinned the system and how these were institutionalised over time. Having considered some of the ways in which certain neoliberal ideas about economic governance and about energy influenced, over the course of the 1980s, the construction of a new system of energy governance chapter three concluded that the UK had established a pro-market energy policy paradigm (PEPP) by the early 1990s. The PEPP was, in short, a system fashioned to achieve a competitive, cost efficient, privately run energy system.

The section above, on measuring change, referred back to the five levels of the PEPP. These five levels have provided us not only with a mechanism for measuring change but also, however, with a great amount of detail about how the PEPP operated. The first two levels, ideas about energy and energy governance, can be understood as the interpretive framework of the PEPP, whilst the other three are more indicative of the specific ways in which these influential ideas became embedded. The concept of policy paradigms can tell us a lot about how interpretive frameworks, or sets of ideas, can frame thinking about policy, through influencing interpretations of events and by limiting the range of responses (Hall 1993; Campbell 1998; Berman 1998; Hay 2001; Greener 2001; Blyth 2002; Gamble 2009; Chwierorth 2010; cf. Rutledge 2007; Mitchell 2008; Kern 2009).

Peter Hall's notion of policy paradigms raised the question of the cognitive element of policy decision-making by suggesting that, over time, the original set of ideas can become taken for granted and less amenable to scrutiny (Hall 1993: 279). Concepts drawn from discursive institutionalism have also raised the cognitive element of understanding policy-makers' choices and modus operandi, by explaining the role of language and credibility in marginalising other sets of ideas (Yee 1996; Campbell 1998; Schmidt and Radaelli 2004; Geddes and Guiraudon 2004; Schmidt 2006; Kern 2009). These insights can be considered especially important as time passes and those

responsible for translating certain ideas into policy practice leave the policymaking community. The quote from John Maynard Keynes that precedes this subsection is a healthy reminder that ideas have long proven difficult to shift, and these various explanations help us to understand how this can be, specific to policymaking practices.

The definition of a policy paradigm utilised in this thesis has provided more opportunity for understanding both ideas and how they relate to and influence political practice. This has been done by taking a policy paradigm to represent policy objectives and practices as well as representing physical institutions of governance and the interpretive framework. In doing so ideas, as accepted and established, have been strongly emphasised in terms of the ways in which they delineate politics, deliberation and agency.¹⁵³ The inclusion of the other layers has allowed us to consider not just which ideas influence political practice and how, but, in addition, the ways in which these ideas became institutionalised over time. The ways in which ideas have become embedded can, in particular, tell us a lot about how ideas can prove resistant to change.

There is a further conceptual link that can be identified here between notions of what constitutes an *embedded* policy paradigm (Hall 1993; Jacobsen 1995; Hay 2001; Blyth 2002; Chwieroth 2007), and processes of depoliticisation (Flinders and Buller 2006; Hay 2007; Wood 2011). In chapter two it was suggested that depoliticisation can be considered as a method in embedding a policy paradigm, both in terms of the ideas which underpin it and the political practice emanating from them. This thesis has actively utilised those varying forms of depoliticisation that were defined in chapter two to show both how they served to institutionalise particular ideas and to further reinforce specific forms of practice.

As a reminder, these forms were defined as ‘marketised’, ‘technocratic’, ‘deliberative’ and ‘secretive’ and are summarised here below, in table five, in terms of the ideas which underpin them, the way in which they were implemented and some outcomes of these processes. Three of the four forms of depoliticisation have been reasonably specific to the PEPP, leaving ‘secretised’ depoliticisation as a form which was put into use regularly across energy policy paradigms, including under the Keynesian model preceding the PEPP.

¹⁵³ Clearly, later chapters on change have illustrated just how difficult the process of establishing a set of ideas can be.

Table 6: Types of Depoliticisation¹⁵⁴

<i>Marketised (type 1)</i>	<i>Technocratic (type 1)</i>	<i>Deliberative (type 2)</i>	<i>Secretised</i>
<ul style="list-style-type: none"> - Specific political decision - Reflects ideas about economic governance 	<ul style="list-style-type: none"> - Specific political decision - Reflects ideas about state capacities for economic policymaking 	<ul style="list-style-type: none"> - Take energy out of political arena - Outcome of technocratic depoliticisation and implied in policy paradigms 	<ul style="list-style-type: none"> - Specific political decision (Official Secrets Act) - Reflects ideas about security, national interest and threat
<ul style="list-style-type: none"> - Energy to be supplied by the private sector - State responsible for framework to enable private sector supply 	<ul style="list-style-type: none"> - Responsibility for energy policy to be placed at a remove from Government - Independent bodies to be created and populated by technical experts 	<ul style="list-style-type: none"> - Elected Members of Parliament seldom debate energy - Usual public channels of communication also relatively silent 	<ul style="list-style-type: none"> - Political decision-making should take place in secret for national security reasons - Removal from realm of open political and public deliberation
<ul style="list-style-type: none"> - National or societal interests not apparent or of interest to private sector companies - Low incentive to re-invest in highly capital intensive sector - High asset depletion rates - RPI-X incentivises keeping costs low 	<ul style="list-style-type: none"> - Energy governance is rarely discussed outside of expert communities - Increasing lack of political capacity to understand energy - Lower visibility of policy choices - Harder to relate choices to outcomes - Economists 	<ul style="list-style-type: none"> - Reduced awareness of energy, its role in society and potential pitfalls - Reinforces lack of political interest in and capacity to understand energy - Reduces capacity for political agency and choice - Energy as a-political 	<ul style="list-style-type: none"> - Decisions, which might otherwise be politically difficult, can be made - Input from opposing groups reduced

What each of these forms of depoliticisation has in common is the degree to which, through structuring ideas within political institutions, they have served to reduce

¹⁵⁴ Types 1 and 2 in this table refer to Colin Hay's definitions of depoliticisation (Hay 2007: 82-86).

political *capacity* for informed agency and choice. Limited political capacity is considered here as ultimately important. Hay sees politics as "... the capacity for agency and deliberation in situations of genuine collective or social choice" (Hay 2007: 77). This thesis has suggested that by placing those actors who have been elected to represent the collective interest at one remove from knowledge about how energy is governed, via the various forms of depoliticisation, energy had become somewhat a-political. For example, by utilising these forms of depoliticisation, particularly 'technocratic' and 'deliberative', this thesis has been able to show why it was so difficult for politicians and policy-makers to recognise significant challenges to the PEPP, as a structure of governance. It has also helped to explain that when these challenges were finally recognised, in the mid to late 2000s, politicians and policy-makers were, for some time, lost for alternative responses. Informed agency and choice were, by this definition, somewhat lacking within the UK energy governance process for much of the 2000s.

These types of depoliticisation have reflected active political decisions to implement, arguably often genuinely held, ideas about the role of the state in energy governance. 'Marketised' depoliticisation appears to be particularly relevant to understanding the PEPP, given that it reflected neoliberal ideas about who should be responsible for the supply of energy. 'Technocratic' depoliticisation, in that it includes the passing of responsibility further from formal politics, might have some brief application also to the period immediately preceding the establishment of the PEPP. In 1969 the Ministry for Power was disbanded and responsibility, as in the 1990s, was ultimately passed to the Department of Industry. This, however, might reflect just as much ideas about expending political and human capacity where it is most needed. What marks 'technocratic' depoliticisation out from this earlier potential example, however, is the degree to which it was decided that 'experts' were to be responsible for policy-making given that politicians were so little 'qualified' to make decisions about technical, economic matters.

All of this was arguably further underpinned by the 'unipolar' moment of the 1990s. It is worth returning here to a 1998 quote from Daniel Yergin in that it is particularly illustrative of an increasingly dominant point of view. He suggested that, in future, it would be the "...economic terms themselves, rather than the philosophy of the terms, over which governments and companies wrangle" (Yergin 1998: x). This is indicative

of a wider viewpoint that liberal, Western capitalism was now the only viable model given the collapse of the Soviet Union and the victory of the West in the Cold War (cf. Fukuyama 1992). For those that believed in the end of ideological history, and there have been arguments put forward that many in British political circles did, not least Tony Blair (cf. Watson 2002; Williams 2005), then there would be little argument for investing political capacity in deliberating and understanding alternative political approaches.¹⁵⁵

1.3 Speaking Security and Repoliticisation

Given the degree to which ideas, institutionalised in political practice and structures, have been characterised here as resistant to change, this infers that any substantive reversal of the PEPP would be difficult to achieve and significant. This is where we turn to the third question posed in the thesis introduction that asks why UK energy governance did indeed start to undergo a process of change. One of the reasons why this thesis has applied a conceptual framework informed by new institutionalism is precisely because that it offers explanations both of consistency and change. If this conclusion were to offer a simple answer as to what the catalyst for change was it would be to suggest that perceptions that UK energy security might be under threat, particularly given interpretations of Russian energy restructuring and associated events, led to a re-igniting of political interest in, and need to understand, energy and governance.

This is where we return, again, to the ways in which applying a range of concepts can inform explanation. This thesis, particularly in chapters five and seven, has suggested that the increasing prevalence of the notion that UK energy supplies might not be secure led to a period within which energy was repoliticised, particularly in a ‘deliberative’ sense. The debate broadened out, energy was discussed in Parliament and within committees, and it included a range of actors, and institutions, not previously directly involved in discussing energy and governance. This both required politicians to be able to answer questions on energy but also caused them to put pressure on the DTI and Ofgem to respond to renewed public and political interest. This points to a role for

¹⁵⁵ Interviews with Foreign Office officials tend to support this point. This is partly why, when Russia started to move away from the ‘Western’ model of energy governance the UK experienced such a sense of surprise and shock.

repoliticisation in the process of change similar to that suggested by Wood in that it allows for political agency (Wood 2011: 22).

One further conceptual insight observable from the ways in which perceptions of crisis related to processes of change, is that this renewed political interest can be understood as causal of the realisation of a lack of capacity to understand energy. And, therefore, also of the process of ‘re-think’ which included a further unwinding of aspects of ‘deliberative’ but also then of ‘technocratic’ depoliticisation. The notion of ‘re-thinking’ energy, specifically in order to return to a position of more *informed* agency, can also help to explain why debates can open up to alternative narratives in times of crisis. What is interesting about the role of re-thinking energy in the process of change is that it, in itself, represents some shift from previous, depoliticised, governance practices. But it arguably also, ultimately, brought politicians and policy-makers to the conclusion that governance change was needed. These observations compliment ideas from new institutionalism about how paradigm change takes place, discussed at length in chapter two (cf. Hay various; Wilson 2000; Mahoney 2000; Greener 2001; Blyth 2002 and 2007; Campbell 2004; Oliver and Pemberton 2004; Widmaier 2005; Widmaier et al 2007; Challies and Murray 2008; Chwioroth 2010).

A further explanation of why change came to be understood as necessary is offered through insights gained from applying the Copenhagen School concept of ‘securitisation’ and ‘securitising moves’ (Waever 1995; Buzan et al 1998). Links have been drawn up, in the second section of chapter seven, between *how* a crisis is perceived, degree of public interest and the perceived need for political agency. The suggestion is that ‘speaking security’, using the evocative language of imminent threat to a nationally defined space, has indeed been an integral part of why UK publics and politicians became interested in energy once more. This provides a useful link between new institutionalist ideas that crises and uncertainty can provide conditions within which paradigm change can take place (Hay 2001; Blyth 2002; Oliver and Pemberton 2004; Widmaier et al 2007; Chwioroth 2010; Mahoney and Thelen 2010) and the language of security as being politically potent. As such, the claim here is that if the crisis had been understood differently then publics and political elites might also have been less interested. As such the type of dominant crisis narrative can not only shape what policies might be accepted in response to that explanation of crisis (Hay 1996;

Blyth 2002), but also whether or not crisis is indeed understood to exist and the degree of political response.

An example of this can be found in chapter five, and chapter seven, where it was argued that Russia's energy governance changes, and the way they were interpreted in the UK, served to raise energy up the political agenda on a domestic as well as international basis. It could further be argued that if these actions had been taken by almost any country other than Russia they might not, perhaps, have had the same public and political impact. Interpretations of Russia as threatening and representing a way of life distinctly alien to the UK appear, arguably due to the Cold War period, to have been deeply embedded. As such 'resource nationalism', conducted by Russia, seems to have provided strong ballast for energy supply to become an issue for national security once more. This suggests that some countries are more suggestible as 'threatening' than others.¹⁵⁶

Another example of the political saliency of certain narratives was suggested in the way in which climate narratives started to change from focusing on stories of long-term, global, but devastating, consequences of climate change to ones based on near-term, national interests. Certainly in the UK, where public support for notions of man-made climate change has historically been relatively low, the narrative of national supply insecurity appears to have prompted political interest, deliberation and re-thinking with an intensity that climate narratives had failed to elicit. This could also be explained by the observation that some subjects, as suggested in chapter two and six, are more suitable to speaking security than others (Wæver 1995; Buzan et al 1998; Browning and MacDonald 2010). Due to historical associations between energy, material power and conflict, as well as those between energy and economic crisis, supplies of energy appear to represent just such a subject.¹⁵⁷

¹⁵⁶ This raises an interesting question about the degree to which 'speaking security' represents a specific political intervention in order to excuse certain policy responses, and to which it represents a reflection of genuine beliefs that Russia could pose a threat to valuable supplies of energy.

¹⁵⁷ A series of high profile IPE analysts, Robert Keohane, Susan Strange and Simon Bromley, have suggested that energy has specific properties, related to power, which mark it out from other subject areas (Keohane 1984; Strange 1988; Bromley 1991). This observation might support these claims.

1.4 The Further Role of Narratives in Processes of Change

We turn here to the last of the four questions raised which asks how processes of change can come about. Clearly, part of answering this question has been covered in the subsection above in so far as there needs to be a reason why changes are understood to be necessary – some sort of prompt for action. Understandings offered so far have been insightful but are incomplete in that they do not explain fully why change was felt to be necessary nor much about how it took place.

This is particularly in that the dominant, geopolitically informed, crisis narrative although politically salient contained little within it to explain mounting political pressure to reduce carbon emissions nor did it appear to suggest a comprehensive and credible response to the energy security crisis. This explanation of why change took place differs from other explanations of the role of narratives in paradigm shift that suggest that the dominant narrative, based on a specific set of ideas, should provide both explanation and comprehensive solution (Hay 1996 and 2001; Blyth 2002 and 2007; Widmaier et al 2007). As such, the geopolitically informed narrative could be understood as a partially effective crisis narrative.

This is where the climate narrative re-enters, particularly in that it seemed to offer a wider range of solutions and a more credible critique of existing policy and governance. Concepts of paradigm change have emphasised the importance of recognition both that anomalies between objectives and outcomes exist and that these anomalies are related to the failure of existing policies (Stone 1989; Hall 1993; Hay 1996 and 2001; Blyth 2002; Oliver and Pemberton 2004). The security of supply narrative had substantially repoliticised energy, certainly in a ‘deliberative’ sense, which had allowed for more informed policy agency to start emerging (cf. Wood 2011: 21). But, in that it was focused on the wrong-doing of others, it did not contain sufficient critique of UK energy policy.

What seems apparent, however, from this analysis is that climate narratives were more successful both in critiquing existing policy structures and in providing for Hall’s “...mounting evidence of failure...” of current policies (Hall 1993: 289; cf. Oliver and Pemberton 2004). As such, although pressures for governance change may have been seen by many policymakers and politicians as coming from without, in terms of various international events, this narrative pointed directly towards credible, endogenous

reasons for change. By openly insisting across various White Papers, in the early to mid 2000s, that existing PEPP instruments would be sufficient to meet objectives policy-makers had left themselves open to critique and diminished credibility. The climate narrative was able, conversely, by the end of the 2000s to claim greater credibility by proving that both renewable energy and carbon emissions targets were being missed. In the absence of deliberative and technocratic re-politicisation, spurred by the sensation of supply crisis, these narratives might not have found the same degree of purchase.

This brings us to the energy-security-climate narrative which emerged as more prominent in the late 2000s. In chapter six it was suggested that various notions from within the energy-climate narrative had started to appear within political narratives on energy, particularly by the new Secretary of State for Energy and Climate Change, Ed Miliband, and Prime Minister Brown's advisor on Energy Security, Malcolm Wicks (Miliband 2008; Wicks 2009; DECC 2009b and 2010b). The appropriation by climate protagonists of ideas about the need for the UK to boost domestic production in order to underpin arguments for renewable energy and energy efficiency suggests that narratives are fluid and changeable over time (cf. Interview 18; Plesch et al 2005; Roberts 2005; Greenpeace 2006; Bird 2007; Ochs 2008; Giddens 2009). As such, in line with conclusions about the emergence of an energy-security-climate norm within energy governance practices, the energy-climate narrative might be considered here as a more successful 'crisis narrative' than either the security or climate narratives on their own.

This suggestion is, however, to suggest a range of new difficulties. It is certainly a more complex proposition in that two narratives, previously considered as separate and underpinned by different ontologies, inform and enable change.¹⁵⁸ In addition, as with the liberal-environmental compromise referenced in various chapters of this thesis, the energy-security-climate narrative drew largely from certain ideas, which were understood to be more politically feasible, whilst rejecting others. In fact this was done specifically because it was felt that ecologically informed climate arguments had not found sufficient purchase with UK audiences to enable change, so the emphasis was on securing change. The emphasis on Britain's energy supply capacities has tended to

¹⁵⁸ A recent paper by Eric Helleiner suggests that the variety of opposing narratives to economic liberalism raises the level of difficulty in answering the question of what will replace it (Helleiner 2004: 685).

marginalise other climate ideas about interdependencies between eco-systems and political, cultural and economic systems and about equity within the global commons (Carter 2003: 16). Again, although the emphasis on developing renewable technologies, through greater state support, was a break with the old liberal-environmental compromise, opposition to nuclear energy, a key environmental idea, was not part of the new nexus.

Because various narratives have been drawn upon to provide explanations of and solutions to crisis, the why and how of change, the emerging energy governance system is, as a result, a hybrid rather than reflecting any distinctive or comprehensive set of ideas. This might tell us something about the seeming lack of ability of this new set of ideas about energy governance to credibly challenge market ideas about energy governance. It might also tell us that, as Oliver and Pemberton have suggested with regard to incomplete paradigm change, the extent of the shock has not yet been sufficient to fully discredit deeply embedded pro-market ideas (Oliver and Pemberton 2004: 435). As such policymakers have seemed to cling to old, established ideas whilst layering new solutions, picked from geopolitical and climate perspectives, on top.

There remains, also, a deep tension, at least theoretically, between responding to perceptions of statist practice by others in energy governance with protectionist measures. The UK in considering Russian energy policy to be illiberal and ‘wrong’ was overtly supporting its position that energy liberalisation and privatisation should continue to expand within the economically inter-connected world. But by re-focusing on boosting independence in energy supply through supporting domestic production the UK is itself turning to geopolitically informed methods of governance, without necessarily approving of such measures. So it appears that government support for changes to domestic production capabilities is acceptable, but not a re-nationalisation of energy companies. A further inconsistency in the refocus on domestic energy production whilst maintaining key pro-market ideas is the questions of why this would be necessary within an world of positive economic interdependency.

A last example of tensions between catalysts for change and responses can be found in the links between growing public interest in energy issues and political response. If politicians are indeed prompted to respond partially in response to growing public interest and if public interest grows at times of perceived energy insecurity and high

energy prices then policy responses, surely, should encourage lower prices going forward. However, by presenting low carbon energy sources, including nuclear, as part of the solution to UK energy security, electricity prices are more likely to rise in future. This is, as will be discussed in more detail below, at a time of growing energy poverty, fiscal austerity and high unemployment.

1.5 Further Conceptual Insights

Lastly, also in terms of understanding how change can take place, it is worth highlighting the role, suggested in chapter seven, of objectives in prompting further governance change in UK energy. It appears as if the new objectives of UK energy policy, once formalised, did drive change despite limited acceptability of new ideas about other methods of governance. This, clearly, applies to the objectives of energy security and lowering carbon dioxide emissions but not to that of energy poverty which still appears somewhat sidelined. Objectives represent an instance within which ideas have, indeed, facilitated change - ideas not about how to govern but about to what end. The re-recognition of energy security as something which actively needed to be achieved, in combination with new, legally binding, climate targets have driven a scramble for credible ideas about how these objectives can be reached. This observation might also help to explain the importance which Hall assigned to 'objectives' in his analysis of third order change, in that paradigm shift can only take place once objectives take place (Hall 1993).

2. Possible Futures

The scramble for credible methods of achieving new objectives is, arguably, still ongoing and this observation brings us to the last section of this conclusion. Although some decisions seem to have been accepted and seem to be in the process of becoming institutionalised the search for legitimate solutions has perhaps been hampered by the observation, made above, that the market mentality still dominates and that faith in old more 'statist' methods of governing is not high. Such questions about methods of governing, with commitment to achieving climate objectives, might be key to linking energy governance change with calls for wider economic governance change in that energy continues to represent a challenge. If objectives are not met they might, of course, ultimately be rejected. Unmet objectives might, conversely, also prompt further evidence of failure, a more thorough discrediting of the currently emerging compromise

model and increased desire to take a risk by looking at alternative solutions. For example, those presented by environmental academics and groups which link climate degradation with current models of capitalism based on growth, individualism and materialism (cf. Meadows et al 1972; Tickner 1993; Bernstein 2001; Carter 2007; Newell and Patterson 2010; Garner 2011)

The above sections have pointed to a number of other specific areas of tension within UK energy governance as of 2010 all of which might provide fruit for future challenges. As briefly suggested at the end of chapter six, one area which could be interpreted as particularly problematic is the objective of addressing energy poverty (cf. Rutledge 2007; Boardman 2011). Some UK energy strategies and legislation have sought, with limited success, to address continuing high levels of energy poverty, but questions of how affordability will relate to more expensive 'clean' energy have not been directly addressed. The social implications of this, coupled with the new era of 'fiscal austerity', have the potential to be deeply and publically discussed, particularly given the suggested correlation between public interest in energy and high energy prices. This might lead to some more serious consideration of such trade-offs between objectives of energy policy.

Comparisons have been drawn in previous chapters between this examination of energy governance change and the paradigm shift observed in UK macro-economic policy in the 1980s, largely to highlight differences between the processes of change (cf. Hall 1993; Hay various; Greener 2001; Blyth 2002; Oliver and Pemberton 2004). It is worth noting another point of difference between these periods of change and that is to suggest that they occurred in response to different formulations of crisis. The dominant explanation of the 1970s crises, as a failure of the state to manage the UK economy, references a very broad area of governance (cf. Hay 1996). Solutions, based largely in different methods of governance whereby the state would withdraw on a relative and absolute basis from active involvement in economic management, necessitated change on a broader scale (cf. Hay various; Blyth 2002). A widely perceived energy crisis offers a more limited critique targeted at the way in which only one, albeit very important, sector of the economy is governed. The dominant explanation adopted in elite political circles has been focused on energy and climate specific problems as largely separate from the overall economic policy paradigm.

Lack of availability of, or perhaps more importantly, faith in alternative frameworks of governance has also been identified in some recent IPE literature on the 2007 credit crunch and banking crisis. Observations have been made that the severe economic crisis of 2008-2010 has not resulted in change partly due to the perceived or real absence of credible ideas about alternatives to existing arrangements or about how the economy should be ordered (Watson 2009a and 2009b; Gamble 2009: 457; Hay 2010: 3).¹⁵⁹ There appears to be growing discontent with the ability of Anglo-liberal growth models to deliver, both within the wider economy and in energy-climate governance, but little faith in available alternative frameworks for governance (cf. Gamble 2009; Hay 2010; Wood 2011; Crouch 2011).

This might partly be ascribed to processes of policy learning (cf. Hall 1993) whereby large political, policymaking and consultancy communities still believe more state-oriented systems of governance, such as Keynesianism, not to have worked in the UK in the past. Lack of willingness to embrace a new set of solutions, such as those contained with environmental arguments about how to build sustainable systems, might also be partly connected with the lack of ability to break with pro-market ideas which many political elites, including many within the Conservative Party, still appear to have a high degree of faith in. Certainly within energy policy circles it is commonplace to suggest that the low energy prices, and secure system of supply were products specifically of the pro-market energy governance system that was then in place (cf. HMG 2011a: 16; DECC 2011d: 3).

This thesis has argued on a number of occasions, in chapter two specifically, that energy and economic governance processes have been deeply inter-related both under Keynesianism and neo-liberalism. This inter-relationship seems to have worked such that the flow of ideas has been largely one-directional in that ideas about economic governance have tended to influence decisions made about energy and not vice-versa. This chapter will end, however, with some questions about the ability for ideas about climate governance to impact on ideas about economic governance. To the extent that the 2008 Climate Change Act has already had implications across government departments, might continued requirements to change to meet climate targets, whilst maintaining energy security, not have further implications for the way we live and,

¹⁵⁹ In fact Hay sees 'pathology without crisis' specifically in that his understanding of crisis infers successful change.

specifically, for the ultimate target of economic growth? If we return to chapter one we can see that this argument has, for some time, been put forward within environmental communities but with little success (Bernstein 2001; Giddens 2009; IPPR 2009; Friedrichs 2010; Newell and Paterson 2010). If current governance systems continue to fail, if we emerge, as one climate analyst has suggested into a situation of “post-normal science” where “...facts are uncertain, values in dispute, stakes high and decisions urgent...”, then this might suggest that the real challenge and change is yet to come (Ravetz in Friedrichs 2010: 2).

3. Final Reflections

As a final comment it might be worth reflecting that some of the questions posed by this thesis have offered themselves up to more decisive answers than others. In particular the question, which might on first glance have appeared more straight forward, of whether or not policy paradigm change has occurred has proven the most problematic to answer. This is despite attempts made, in chapter two, to be rigorous in laying out a system for measuring profound change. Arguably this has much to do with the time-frame within which the analysis was conducted, which as suggested in the introduction has not left much room for hindsight, nor for certainty as energy governance changes are still ongoing. What is also less than discernable is the precise direction of change that is taking place in that it does not suggest movement toward a new and cohesive framework. Instead, it appears that in response to perceived crisis, critique and policy failure, the UK by failing to reject central tenets of the PEPP, whilst at the same time adopting ideas from geopolitical and climate perspectives, may be indulging in what has recently been termed “inter-paradigm borrowing” (Hay 2010: 22-23).

What have been easier to answer are questions of *why* and *how* changes have taken place. Insights from ideational and discursive institutionalism, alongside those from the Copenhagen and critical security schools have allowed this thesis to present a very rich and contextualised explanation of change. In particular, the relationships drawn out between public acceptance of security explanations of crisis, processes of repoliticisation and political processes of ‘re-think’ have been crucial in understanding *how* change took place. This is one of the ways in which this thesis has contributed to understandings of the links between crises *as*

perceived and possibilities for change and between narratives as vehicles for those perceptions as well as for critique of current policymaking practices.

This thesis has also contributed to the literature on energy and paradigms by providing more precise definitions of how policy paradigms work and ways in which they can become embedded, in particular via various processes of depoliticisation. The application of these understandings to UK energy governance during the first years of the 2000s has helped to provide some answers as to why so little change took place despite mounting political support for climate change mitigation. In particular the notions of ‘technocratic’ and ‘deliberative’ depoliticisation used alongside the inclusion of physical institutions of governance as a level of the PEPP have shone particular light on self-perpetuation and resistance to new ideas. As such the ‘energy security-climate nexus’ sits nestled within still embedded ideas about the role of markets, competition and cost efficiency.

However this thesis does leave open possibilities for further change. The literature on energy and paradigms has, when identifying ideas as influential, tended largely to focus on ideas about governance. However, by including ideas about energy as an important level of the PEPP and by noting the degree to which these seem to have started to change at an elite political level one driver for further change can be identified. Another contribution is the suggestion that objectives can be drivers for change, a notion implicit in Peter Hall’s 1993 work on paradigm change (Hall 1993). Given the degree of political re-focus on energy security alongside binding UK, and EU, climate targets energy governance has much to keep up with over the next decade up until 2020.

Bibliography

Aalto, Pami ed. (2007) *The EU-Russia Energy Dialogue – Securing Europe’s Future Energy Supplies?*, London: Ashgate.

Adam, David (2007) ‘Britain tries to block European targets for renewable energy’, *The Guardian*, Tuesday 13 February 2007.

AFX News (2007) ‘UK, Russia to sign up to new deal on energy forum during Darling trip to Moscow’, *ABC Money*. Available at: <http://www.abcmoney.co.uk/news/07200719067.htm> (Last accessed 22nd November 2010).

Aleklett, Kjell; Hook, Mikael; Jakobsson, Kristofer; Lardelli, Michael; Snowden, Simon; Soderbergh, Bengt (2010) ‘The Peak of the Oil Age: Analysing the World Oil Production Reference Scenario in World Energy Outlook 2008’, *Energy Policy* 38, 3, pp. 1398-1414.

Allison, Roy (2006) ‘Russia in Europe or Russian and Europe’, in Roy Allison, Margot Light and Alex White eds. *Putin’s Russia and the Enlarged Europe*. Oxford: Blackwell Publishing.

Adler, Emmanuel and Haas, Peter M. (1992) ‘Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Program’ in *International Organization* 46, 1, pp. 367-390.

Baghat, Gawdat (2006) ‘Europe's Energy Security: Challenges and Opportunities’, *International Affairs* 82, 5, pp. 961-975.

Balzer, Harley (2006) ‘Vladimir Putin’s Academic Writings and Russian Natural Resource Policy’. *Problems of Post Communism*, January/February 2006, pp. 48-54.

Barnett, Jon (2001) *The Meaning of Environmental Security: ecological politics and policy in the new security era*. London: Zed Books.

Barton, Barry; Redgwell, Catherine; Ronne, Anita; Zilman, Donald N. (2004) *Energy Security: Managing Risk in a Dynamic Legal and Regulatory Environment*. Oxford: Oxford University Press.

Barysch, Katinka (2007) ‘Three questions that Europe must ask about Russia’, a *Centre for European Reform Briefing Note*. London: Centre for European Reform.

Bean, Bruce W. (2004) 'Yukos and Khodorovsky: An Unfolding Drama' in Daniel McCarthy, Sheila Puffer and Stanislav Shekshnia eds. *Corporate Governance in Russia*. Cheltenham UK: Edward Elgar.

Behn, Daniel; Pogoretskii, Vitaliy (2010) 'Governing Natural Resources and Energy Endowments within the Existing Frameworks in Europe and Russia', a paper for the *PEEER Conference*, 3-4 September 2010, Warwick. Available at: <http://www2.warwick.ac.uk/fac/soc/csgr/peer/warwick/> (Last accessed 1st September 2011).

Behr, Timo (2009) 'The 2008 Oil Price Shock': Competing Explanations and Policy Implications', *GPPi Global Energy Governance Project, Policy Paper Series No. 1*.

Belyi, Andrei (2003) 'New Dimensions of Energy Security of the Enlarging EU and their Impact on Relations with Russia', *European Integration*, 23, 4, pp. 351-369.

Belyi, Andrei and Kuzemko, Caroline (2007) 'Conflict of Values over the Regulation of Gas Markets: a View of Russo-British Relations', Defence Academy of Great Britain. Available at: www.ndc.nato.int/research/series.php?icode=9

Berlin, Isaiah (1977) *Russian Thinkers*. London: Penguin Books.

Berman, Sheri (1998) *The social democratic moment: ideas and politics in the making of interwar Europe*. Harvard: Harvard University Press.

Bernstein, Steven (2001) *The Compromise of Liberal Environmentalism*. New York: Columbia University Press.

Berry, Craig (2008) 'Political Economy and Ideational Analysis: Towards a Political Theory of Agency', *IPEG Papers in Global Political Economy*, no. 36 July 2008.

Bevir, Mark (2005) *New Labour: a Critique*. London and New York: Routledge.

Bielecki, J. (2002) 'Energy security: Is the wolf at the door?', *The Quarterly Review of Economics and Finance* 42, pp. 235-250.

- Bird, Jenny (2007) *Energy Security in the UK*. London: Institute for Public Policy Research.
Available at:
<http://www.ippr.org.uk/publicationsandreports/publications.asp?title=energy+security+in+the+uk&author=jenny+bird&pubdate=&policyarea=&search=search> (Last accessed October 2008)
- Birol, Fatih (2007) 'The Investment Implications of Global Energy Trends' in David Helm ed. *The New Energy Paradigm*. Oxford: Oxford University Press.
- Blackhurst, Bob (2004) 'Can we Wait for Renewables?' at the *Foreign Policy Centre*:
<http://fpc.org.uk/articles/264> (accessed 19/10/10)
- Blyth, Mark (2007) 'Powering, Puzzling or Persuading? The Mechanisms of Building Institutional Orders', *International Studies Quarterly* 51, pp. 761-777.
- Blyth, Mark (2003) 'Structures do not Come with an Instruction Sheet: Interests, Ideas and Progress in Political Science', *Perspectives on Politics* 1, 4, pp. 695-706.
- Blyth, Mark (2002) *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*. New York: Cambridge University Press.
- Blyth, William (2010) 'How Do Emerging Carbon Markets Influence Energy Sector Investments?' in Andreas Goldthau and Jan Martin Witte eds. *Global Energy Governance: The New Rules of the Game*. Berlin and Washington: GPPI and Brookings Institute.
- Boardman, Brenda (2011) 'Liberalisation and Fuel Poverty', in Ian Rutledge and Phillip Wright eds. *UK Energy Policy and the End of Market Fundamentalism*. Oxford: Oxford Institute for Energy Studies.
- Bohi, D. R.; Toman, M.A. (1996) *The Economics of Energy Security*. Massachusetts: Kluwer Academic Publishers.
- Booth, Ken (ed.) (2005) *Critical Security Studies and World Politics*. Colorado: Lynne Rienner.
- Borenstein, Severin and Bushnell, James (2000) 'Electricity Restructuring: Deregulation or Reregulation?', *Regulation* 23, 2: 46-52.

Boussena, S.; Locatelli C. (2004) 'Towards a more Coherent Oil Policy in Russia?', *Opec Review* XXIX, 2, June, pp. 85-105.

Boute, Anatole (2010) 'Energy Efficiency as a New Paradigm of European External Energy Policy: the Case of EU-Russia Energy Dialogue', *conference paper for PEEER*, Warwick 2010, available at:

<http://www2.warwick.ac.uk/fac/soc/csgr/peeer/warwick/> (Last accessed 1st September 2009)

Bradshaw, Michael; Bond, Andrew (2004) 'Crisis Amid Plenty Revisited: Comments of the Problematic Potential of Russian Oil', *Eurasian Geography and Economics* 45, 5, pp. 352-358.

Boix, Charles (2004) *Democracy and Redistribution*, Cambridge: Cambridge University Press.

Borenstein, Severin and Bushnell, James (2000) 'Electricity Restructuring: Deregulation or Reregulation?', *Regulation* 23, 2: 46-52.

Braudel, Fernand; Matthews, Sarah (1982) *On History*. Chicago: the University of Chicago Press.

Brill Olcott, Martha (2004) 'The Energy Dimension in Russian Global Strategy: Vladimir Putin and the Geopolitics of Oil', Paper for the *James Baker Institute for Public Policy* at Rice University.

BBC (2010) 'Climate Scepticism on the Rise', *BBC News Website*, 7th February, 2010. Available at: <http://news.bbc.co.uk/1/hi/8500443.stm> (Last accessed on 6th May 2011)

BBC (2009) 'Fuel poverty continues to rise'. Available at: <http://news.bbc.co.uk/1/hi/business/8317020.stm> (Last accessed 4th February 2011)

BBC (2008) 'Energy Hungry Europe warms to Norway': <http://news.bbc.co.uk/1/hi/world/europe/7588746.stm> (Last accessed 9th February 2009)

BBC (2006) 'Putin criticises West of energy', *BBC News*, Thursday, 27 April 2006. Available at: <http://news.bbc.co.uk/1/hi/business/4950624.stm> (Last accessed September 2011).

BP (2008) BP Quarterly Data 2004 to 2008. Available at: http://www.investis.com/bp_acc_ia/quarterly2008Q4/htdocs/reports/report_18.html (Last accessed 2nd August 2011).

Bromley, Simon (2006) Blood for Oil? *New Political Economy*, 11, pp. 419-433.

Bromley, Simon (1991) *American hegemony and world oil: the industry, the state system and the world economy*. Oxford: Polity Press.

Brown, Chris (2010) 'Cosmopolitanism, Emancipation and Critical Security Studies', Paper for the *SGIR 7th Pan-European International Relations Conference*, Stockholm, September 2010. Available at: <http://stockholm.sgir.eu/> (Last accessed 23rd May 2011).

Browning, Christopher S.; McDonald, Matt (2010) 'The Future of Critical Security Studies: CSS, Ethics and Pathways for Future Research', Paper for the *SGIR 7th Pan-European International Relations Conference*, Stockholm, September 2010. Available at: <http://stockholm.sgir.eu/> (Last accessed 5th October 2010)

Brundtland, Gro Harlem et al (1987) *Our Common Future*. Oxford: Oxford University Press.

Bulkeley, H. (2000) 'Discourse coalitions and the Australian climate change policy network', *Environment and Planning C: Government and Policy* 18, 6, pp. 727-48.

Burnham, Peter (2001) 'New Labour and the politics of depoliticisation', in *British Journal of Politics and International Relations* 3, 2, pp. 127-49.

BERR (Department for Business, Enterprise and Regulatory Reform) (2008) *Autumn Performance Report 2008*. London: BERR

BERR (2006) *UK response to the Commission Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy*. London: the Department for Business, Enterprise, and Regulatory Reform (BERR). Available at: www.berr.gov.uk/files/file31659.pdf# (Last accessed November 2010)

Buzan, Barry; Waeber, Ole; de Wilde, Jaap (1998) *Security: a New Framework for Analysis*. Colorado: Lynne Rienner Publications.

Cabinet Office (2008) *Machinery of Government. Business, Climate Change, Energy and Environment*. London: Cabinet Office. Available at: <http://www.docstoc.com/docs/39316413/MACHINERY-OF-GOVERNMENT> (Last accessed September 2011)

Campbell, David (2005) 'The Biopolitics of Security: Oil, Empire and the Sports Utility Vehicle', *American Quarterly* 57, 3, pp. 943-972.

Campbell, John L. (2004) *Institutional Change and Globalization*. Princeton and Oxford: Princeton University Press.

Campbell, John L. (1998) 'Institutional Analysis and the Role of Ideas in Political Economy', *Theory and Society* 27, 3, pp. 377-409.

Carbon Trust (2006) *Policy Frameworks for Renewables: an analysis of policy frameworks to drive future investment in near or long term power in the UK*. London: The Carbon Trust.

Available at:

<http://www.carbontrust.co.uk/Publications/pages/publicationdetail.aspx?id=CTC610&respos=0&q=CTC610&o=Rank&od=asc&pn=0&ps=10&w=True> (Last accessed 7th March 2011)

Carter, Neil (2007) *The Politics of the Environment: Ideas, Activism, Policy: Second Edition*. Cambridge: Cambridge University Press.

Carter, Neil (2001) *The Politics of the Environment: Ideas, Activism, Policy*. Cambridge: Cambridge University Press.

CCC (Committee on Climate Change) (2010) *The Fourth Carbon Budget: Reducing Emissions Through 2020*. London: Committee on Climate Change.

CEPMLP (Centre for Energy, Petroleum and Mineral Law and Policy) (2006) 'Security of International Oil and Gas: Challenges and Research Priorities', *A Project for the Economic and Social Research Council* by CEPMLP, University of Dundee. Available at:

<http://www.dundee.ac.uk/cepmlp/Research/ESRC%20CEPMLP%20FinalReport.pdf> (Last accessed September 2011)

Challies, Edward R. T.; Murray, Warwick E. (2008) Towards post-neoliberalism? The comparative politico-economic transition of New Zealand and Chile. *Asia Pacific Viewpoint*, 49, 2, pp. 228-43.

Cherp, Aleh; Jewell, Jessica (2011) 'The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration', *Current Opinion on Environment and Sustainability* 3, pp. 1-11.

Chesshire, John (1986) 'The Elmstar Lecture: An energy-efficient future: A strategy for the UK', *Energy Policy*, October 1986, pp. 395.

Chen, Matthew E.; Jaffe, Any Myers (2002) 'Energy Security: Meeting the Growing Challenge of National Oil Companies', *The Whitehead Journal of Diplomacy and International Relations*, Summer/Fall 2007, pp. 9-21.

Cherp, Aleh; Jewell, Jessica (2011) 'The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration', *Current Opinion in Environmental Sustainability*, 3, pp. 1-11.

Cho, David (2008) 'A Few Speculators Dominate Vast Market for Oil Trading', *The Washington Post*, Thursday, August 21, 2008. Available at:
<http://www.washingtonpost.com/wp-dyn/content/article/2008/08/20/AR2008082003898.html>
(Last accessed August 2011)

Chwieroth, Jeffrey M. (2010) 'How do Crises Lead to Change? Liberalizing Capital Controls in the Early Years of New Order Indonesia', *World Politics* 62, 3, pp. 496-527.

Chwieroth, Jeffrey M. (2007) 'Testing and Measuring the Role of Ideas: The Case of Neoliberalism in the International Monetary Fund', *International Studies Quarterly* 51, pp. 5-30.

Cipolla, Carlo M. (1962) *The Economic History of World Population*. Harmondsworth, UK; Baltimore, USA; Ringwood, Australia: Penguin Books.

Ciuta, Felix (2010) 'Conceptual Notes on Energy Security: Total or Banal Security?', *Security Dialogue* 41, 2, pp. 123-144.

Clarke, Duncan (2007) *Empires of Oil: Corporate Oil in Barbarian Worlds*. London: Profile Books Ltd.

Coates, David; Hay, Colin (2001) 'The Internal and External Face of New Labour's Political Economy', *Government and Opposition* 36, 4, pp. 447-71.

Collins, David (1998) *Organizational Change: Sociological Perspectives*. London: Routledge.

CBI (Confederation of British Industry) (2006) 'Powering the future: Enabling the UK energy market to deliver', *Energy Brief November 2005*. London: Confederation of British Industry.

Considine, Jennifer; Kerr, William (2002) *The Russian Oil Economy*. Cheltenham, UK: Edward Elgar.

Cooper, Ken (1987) 'Conference reports: A UK energy policy – the ghost at the feast', *Energy Policy*, April 2007, pp. 169-170.

Correlje, Aad; van der Linde, Coby (2006) 'Energy supply security and geopolitics: A European perspective', *Energy Policy* 34, pp. 532-543.

Cox, Robert (1981) 'Social Forces, States and World Orders: Beyond International Relations Theory', *Journal of International Studies*, 10, 2, pp. 204-254.

Crooks, Ed (2007) 'High oil prices threaten to linger', Financial Times FT.com, July 18 2007. Available at:
<http://www.ft.com/cms/s/0/0a6e6b54-3550-11dc-bb16-0000779fd2ac.html#axzz14yquiKBS>
(Last accessed 3rd August 2011)

Dalby, Simon (2009) *Security and Environmental Change*. Cambridge, UK; Malden, MA: Polity.

Dasgupta, Partha (1991) 'The Environment as Commodity' in Dieter Helm ed. *Economic Policy Towards the Environment*. Oxford and Massachusetts: Blackwell Publishers.

Dasgupta, P. S. and Heal, G. M. (1979) *Economic Theory and Exhaustible Resources*. Welwyn, Cambridge: Cambridge University Press.

Davidson, Paul (2009) 'Crude Oil Prices: Market Fundamentals or Speculation?', *Challenge*, 51, 4, pp. 110-18.

Davies, P. A. (1996) 'The UK Energy Experience: A Model or a Warning?', in G. MacKerron and P. Pearson eds. *The UK Energy Experience: A Model or a Warning?* London: Imperial College Press.

DECC (2011a) 'About us', DECC website: Available at:
<http://www.decc.gov.uk/en/content/cms/about/about.aspx> (Last accessed 15th March 2011).

DECC (2011b) *Annual Report on Fuel Poverty Statistics 2011*. London: Department of Energy and Climate Change. Available at:

<http://www.decc.gov.uk/assets/decc/Statistics/fuelpoverty/2203-pn062.pdf> (Last accessed 1st September 2011).

DECC (2011c) *Electricity Market Reform: a Consultation Document*. London: TSO.

DECC (2011d) *Planning our electric future: a White Paper for secure, affordable and low-carbon electricity*. London: HMSO.

DECC (2010) *Energy Bill Factsheets: Ofgem's principal objective*. London: Department of Energy and Climate Change.

DECC (2009a) *The Low Carbon Transition Plan: National strategy for climate and energy*. London: TSO.

DECC (2009b) *The UK Renewable Energy Strategy*. London: HMSO.

DECC (2009c) *Government Response to Malcolm Wicks's Review of International Energy Security, 'Energy Security: A national challenge in a changing world'*. London: Department of Energy and Climate Change.

DECC (2009d) *Climate Change Act: the Final Implementation Assessment*. London: Department for Energy and Climate Change. Available at:
http://www.decc.gov.uk/en/content/cms/legislation/cc_act_08/cc_act_08.aspx (Last accessed 1st September 2011).

DECC (2008) 'UK Renewable Energy Strategy: Viable and Deliverable?', Presentation at the *British Energy Association*, November 2008.

Department of the Environment (1990) *This Common Inheritance*. CM1200. London: HMSO.

Department of the Environment (1988) *Our Common Future: A Perspective by the United Kingdom on the Report of the World Commission on Environment and Development*. London: HMSO.

DEFRA (2006) *Climate Change: the UK Programme 2006*. London: The Department of the

Environment and Rural Affairs. Available at:

http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_climate/programme/programme.aspx (Last accessed August 2010)

DETR (2000) *Climate Change: the UK Programme 2000*. CM4913. London: TSO.

DoE (Department of Energy) (1982) 'Speech on energy policy – Energy Paper Number 51'. London: HMSO.

DoE (Department of Energy) (1978) *Consultation on Energy Policy*. London: HMSO.

DTI (2007) *Meeting the Energy Challenge: An Energy White Paper*. London: TSO. Available at: <http://www.official-documents.gov.uk/document/cm68/6887/6887.asp> (Last accessed 1st September 2011)

DTI (2006a) *Secretary of State's Second Report to Parliament on Security of Gas and Electricity Supply in Great Britain*. London: TSO.

DTI (2006b) *The Effectiveness of Current Gas Security of Supply Arrangements: a Consultation*. London: The National Archives. Available at: <http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/consultations/page34643.html> (Last accessed 11th November 2010).

DTI (2006c) *The Energy Challenge Energy Review Report 2006*. London: TSO.

DTI (2005a) *Secretary of State's First Report to Parliament on Security of Gas and Electricity Supply in Great Britain*. London: TSO.

DTI (2005b) 'Conditions for a Truly Competitive Gas Markets in the EU', Report prepared for the DTI by *Energy Markets Limited*, Middlesex. Available at: <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/whatwedo/energy/markets/liberalisation/page28403.html> (Last accessed 5th October 2010)

DTI (2003) *Energy White Paper: Our Energy Future – Creating a Low Carbon Economy*. London: HMSO.

DTI (2001) *Social, Environmental and Security of Supply Policies in a Competitive Energy Market: A Review of Delivery Mechanisms in the United Kingdom*. London: Department of Trade and Industry.

DTI (2000a) *Energy Paper 68*. London: Department of Trade and Industry.

DTI (2000b) 'New and Renewable Energy: Prospects for the 21st Century: The Renewables Obligation Preliminary Consultation'. *BERR*. Available at: www.berr.gov.uk/files/file21097.pdf (Last accessed 20th January 2011).

DTI (2000c) *The Energy Report, Vol. 4*. London: Department of Trade and Industry.

DTI (1998a) *Our Competitive Future: Building the Knowledge Driven Economy*. London: the National Archives. Available at: http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/comp/competitive/wh_ch4_1.htm (Last accessed July 2011).

DTI (1998b) *Conclusions of the Review of Energy Sources for Power Generation*, Cm 4071. London: TSO.

DTI (1999) *New and Renewable Energy – Prospects for the 21st Century*. London: TSO.

DTI (1997) *The Energy Report, Vol. 1: Shaping Change*. London: Department of Trade and Industry.

Deudney, David (2006) 'Security', in Andrew Dobson and Robyn Eckersley eds. *Political Theory and the Ecological Challenge*. Cambridge: Cambridge University Press.

Deudney, Daniel (1990) 'The Case Against Linking Environmental Degradation and National Security', *Millennium: Journal of International Studies* 19, 3, pp. 461-476

Dickel, Ralf (2010) 'Trade and Investment in Global Energy: A Policy Perspective' in Andreas Goldthau and Jan Martin Witte eds. *Global Energy Governance: The New Rules of the Game*. Berlin and Washington: GPPI and Brookings Institute.

Dryzek, John (2005) *The Politics of the Earth: Environmental Discourses*. Oxford: Oxford University Press 2nd edn.

Dutton, Kevin (2010) *Flipnosis: The Art of Split-Second Persuasion*. London: William Heinemann

Eaglesham, Jean (2006) 'Proposal to block Gazprom generates unease', *Financial Times* 18 April 2006. Available at:
<http://www.ft.com/cms/s/0/a9e7539e-ce77-11da-a032-0000779e2340.html>

Eden, R.; Posner, M.; Bending, R.; Crouch, E.; and Stanislaw J. (1981) *Energy Economics*. Cambridge: Cambridge University Press.

Economist, The (2008) 'Green and black', *The Economist* April 5th 2008.

Economist, The (2006) 'Don't Mess with Russia', Front cover of *The Economist*, 15th to 22nd December, 2006.

Economist, The (2004a) 'Putting up with Putin: How to live with a Russia that is not a liberal democracy', *The Economist*, May 22nd, 2004.

Economist, The (2004b) 'Having it both ways', *The Economist*, May 22nd, 2004.

Economist, The (2003) 'Electricity in other countries. Could it happen to us?', *The Economist*, 21st August 2003. Available at: <http://www.economist.com/node/2003561> (Last accessed 8th September 2011).

Egenhofer, Christian; Legge, Thomas (2001) 'Security of Energy Supply: A Question of Policy or the Markets', *Report of a CEPS Working Paper*. Brussels: Centre for European Policy Study.

Eichenwald, Kurt (2002) 'Enron Buffed Image to a Shine Even as It Rotted From Within', *New York Times*, February 10, 2002.

Erixon, Fredriks (2009) Europe's Energy Dependency on Russia's Commercial Assertiveness. Brussels: European Centre for International Political Economy. Available at:
<http://www.ecipe.org/publications/ecipe-policy-briefs/europe2019s-energy-dependency-and-russia2019s-commercial-assertiveness-what-should-the-eu-do/PDF> (last accessed 29th June 2011)

Ernst & Young (2006) 'The Case for Liberalisation' a Department of Trade and Industry (DTI) Research Project. Available at:
<http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/whatwedo/energy/markets/liberalisation/page28403.html> (Last accessed 5th October 2010)

EC (European Commission) (2011) 'Security of Energy Supply in Europe: Continuous Adaptation', *The European Files*, May-June 2011, no. 22. Available at: http://ec.europa.eu/energy/publications/doc/20110601_the_european_files_en.pdf (Last accessed 1st September 2011)

EC (2007) 'An Energy Policy for Europe', a Communication from the Commission to the European Council and the European Parliament. Available at: http://ec.europa.eu/energy/energy_policy/doc/01_energy_policy_for_europe_en.pdf (Last accessed July 2011).

EC (2006) Green paper – A European Strategy for Sustainable, Competitive and Secure Energy. Brussels: European Commission. Available at: http://ec.europa.eu/energy/strategies/2006/2006_03_green_paper_energy_en.htm (Last accessed September 2011).

Evans, Julian (2006) 'Oil giants in legal row with Russia over joint projects', *The Times* Friday September 22 2006.

Ezra, Derek (1983) *The Energy Debate*. Croydon: Ben Technical

Feis, Herbert (1950) 'The Effect of the World Distribution of Petroleum on the Power and Policy of Nations', in Wallace E. Pratt and Dorothy Good eds. *World Geography of Petroleum*. Princeton.

Fells, Ian (2001) UK Energy Policy: some paradoxes and anomalies. Newcastle-upon-Tyne: Fells Associates. Available at: <http://fellsassociates.awardspace.com/site/LinkedDocuments/Energy%20Policy%20Paradoxes%2010-1-00.pdf> (Last accessed 6th September 2011).

Fells, Ian and Lucas, Nigel (1992) 'UK energy policy post privatization', *Energy Policy*, May 1992, pp. 386-89.

Fine, Ben (1990) *The Coal Question: Political Economy and Industrial Change from the Nineteenth Century to the Present Day*. London: Routledge.

- Finon, Dominique and Locatelli, Catherine (2008) 'Russian and European gas and interdependence: could contractual trade channel geopolitics?', *Energy Policy* 36, 1, pp. 423-442.
- Flinders, Matthew and Buller, Jim (2006) 'Depoliticisation: Principles, Tactics and Tools', in *British Politics* 1, pp. 293-318.
- Florini, Ann; Sovacool, Benjamin K. (2011) 'Bridging the Gaps in Global Energy Governance', *Global Governance*, 17, pp. 57-74.
- Floyd, Rita (2007) 'Towards a consequentialist evaluation of security: bringing together the Copenhagen and the Welsh Schools of security studies', *Review of International Studies* 33, pp. 327-350.
- FAC (Foreign Affairs Committee) (2008) 'Global Security: Russia', *Second from the Foreign Affairs Committee, Session 2007-08*. London: HMSO. Available at: www.fco.gov.uk/Files/kfile/FACReportRussia07-08Response.pdf - 273k (Last accessed July 2011)
- FCO; DTI; DEFRA; SEPN (2004) *UK International Priorities: the Energy Strategy*. London: The Foreign and Commonwealth Office.
- FCO (2003) *UK International Priorities: A Strategy for the FCO*. London: Cabinet Office
- Forman, Nigel (MP) (1977) *Towards a more conservative energy policy*. London: Conservative Political Centre.
- Fox, Liam (2006) *Over a Barrel: the Challenge of Defense and Energy Security*. The Westminster Energy Forum:
http://www.westminsterenergy.org/pdf/Over_A_Barrel_-_The_challenge_of_defence_and_energy_security.pdf (Last accessed July 2011)
- Foxon, T.; Pearson, P.; Makuch, Z.; Mata, M. (2005) 'Transforming policy processes to promote sustainable innovation: some guiding principles', *A report for policy makers*. London, Imperial College.
- Frees, B. (2003) *Coal, A Human History*. London: Arrow Books.

- Friedrichs, David (2004) 'Paradigmatic White Collar Crime Cases for the New Century', *Critical Criminology*, 12, p. 113.
- Friedrichs, Jorg (2011) 'Peak energy and climate change: The double bind of post-normal science', *Futures* 43, pp. 1–9.
- Froggatt, Anthony; Levi, Michael A. (2009) 'Climate and energy security policies and measures: synergies and conflicts', *International Affairs*, 85,6, pp. 1129
- Fukuyama, Francis (1992) *The End of History and the Last Man*. London: Hamish Hamilton.
- Gamble, Andrew (2009) 'British politics and financial crisis', *British Politics* 4, 4, pp. 450-62.
- Garner, Robert (2011) *Environmental Politics: The Age of Climate Change*. Hampshire and New York: Palgrave Macmillan.
- Gault, John (2004) 'EU Energy Security and the Periphery' in Roland Danreuther ed. *European Union Foreign and Security Policy: Towards a Neighbourhood Strategy*. London: Routledge.
- Geddes, Andrew and Guiraudon, Virginie (2004) 'Britain, France, and EU Anti-Discrimination Policy: The Emergence of an EU Policy Paradigm', *West European Politics*, 27, 2, pp. 334-53.
- Giddens, Anthony (2009) *The Politics of Climate Change*. Cambridge: Polity Press.
- Gill, S. and D. Law (1988) *The Global Political Economy: Perspectives, Problems and Policies*. Baltimore: Johns Hopkins University Press.
- Gilpin, R (1987) *The Political Economy of International Relations*. Princeton: Princeton University Press.
- G8 (Global Eight) (2006) 'Definition of Global Energy Security', for the G8 Summit 2006, St Petersburg. Available at: <http://en.g8russia.ru/docs/11.html> (Last accessed 1st September 2011).
- Goldthau, Andreas (2010) 'Energy Diplomacy in Trade and Investment of Oil and Gas' in Andreas Goldthau and Jan Martin Witte eds. *Global Energy Governance: the New Rules of the Game*. Berlin: Global Public Policy Institute.

Goldthau, Andreas; Witte, Jan Martin (2009) 'Back to the future or forward to the past? Strengthening markets and rules for effective global energy governance' in *International Affairs* 85, 2, pp. 373-390.

Gonzalez, Pablo Rafael (2006) *Running Out: How Global Shortages Change the Economic Paradigm*. New York: Algora Publishing.

Gotz, Roland (2004) "'Silence for Gas'? Germany's Dependence on Russian Energy', *Stiftung Wissenschaft und Politik: SWP Comments* 27.

GPPI (Global Public Policy Institute) (2008) 'The Changing Rules of the Game: Global Energy Governance and the Transatlantic Agenda', a *GPPI Conference Report*, Potsdam January 31 – February 1 2008.

Graham, Andrew (1997) 'The UK 1979-95: Myths and Realities of Conservative Capitalism', in Colin Crouch and Wolfgang Streeck eds. *Political Economy of Modern Capitalism*. London and Dehli: SAGE Publications.

Grant, Wyn (2000) *Pressure Groups and British Politics*. Hampshire: Macmillan Press Ltd and New York: St Martin's Press, Inc..

Grant, Wyn; Matthews, Duncan; Newell, Peter (2000) *The Effectiveness of European Union Environmental Policy*. London and New York: Macmillan Press Ltd.

Green Alliance (2010) *Towards a bright future: Transforming the electricity market*. London: Green Alliance.

Green Fiscal Commission (2009) 'Doing What it Takes to Reduce Carbon Emissions: The Case for Green Fiscal Reform', *Briefing Paper Four*. London: Green Fiscal Commission. Available at: www.greenfiscalcommission.org.uk (Last accessed September 2010).

Greenaway, John (1998) 'Policy Learning and the Drink Question in Britain 1850-1950', *Political Studies* (1998), XLVI, pp. 903-18.

Greener, Ian (2002) 'Understanding NHS Reform: The Policy-Transfer, Social Learning, and Path-Dependency Perspectives', *Governance: An International Journal of Policy, Administration, and Institutions*, 15, 2, pp. 161-183.

Greener, Ian (2001) 'Social Learning and Macroeconomic Policy in Britain', *Journal of Public Policy*, 21, 2, pp. 133-152.

Greenpeace (2006) *Oil and Peace Don't Mix*. London: GreenPeace. Available at: www.greenpeace.org.uk (Last accessed May 2011)

Guardian, The (2005) 'Russian tycoon jailed for nine years', *The Guardian*, Tuesday 31 May, 2005.

Hadfield, Amelia (2008) 'Energy and foreign policy: EU-Russia energy dynamics' in Steve Smith, Amelia Hadfield & Tim Dunne eds. *Foreign Policy: Theories, Actors, Cases*. Oxford: Oxford University Press.

Hadfield, Amelia (2007) Superpower Ambitions vs. Hyper-dependence: EU-Russia and US Energy Policy. In *International Studies Association 48th Annual Convention*. Chicago.

Hall, Peter A. and Taylor, Rosemary C. R. (1996) 'Political Science and the Three New Institutionalisms', *Political Science* 44, pp. 936-957.

Hall, Peter (1993) 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, 25, 3, pp. 275-296.

Hall, Peter A. (1989) *The Political Power of Economic Ideas: Keynesianism Across Nations*. Princeton: Princeton University Press.

Hall, Peter A. (1986) *Governing the Economy: The Politics of State Intervention in Britain and France*. Cambridge: Polity Press.

Hartshorn, Jack (1966) *A Fuel Policy for Great Britain*. London: A PEP Report.

Havard (2004) 'Gas Storage – the DTI perspective', the Department of Trade and Industry, Energy Markets Unit, *Presentation to the Geological Society*, 19th October 2004.

Haukkala, Hiski (2008) 'Multi-Causal Social Mechanisms and the Study of International Institutionalisation: The Case of EU-Russia Strategic Partnership', PhD Thesis, *University of Turku*, Finland.

Hay, Colin (2010) 'Pathology Without Crisis? The Strange Demise of the Anglo-Liberal Growth Model', *Government and Opposition* 46, 1, pp. 1-31.

Hay, Colin (2009) 'The Winter of Discontent after Thirty Years', *Political Quarterly*, 80, 4, pp. 545-61.

Hay, Colin (2007) *Why We Hate Politics*. Cambridge; Malden SA: Polity Press.

Hay, Colin (2004) 'Ideas, interests and institutions in the comparative political economy of great transformations', *Review of International Political Economy* 11, 1, pp. 204-226.

Hay, Colin (2001) 'The 'Crisis' of Keynesianism and the Rise of Neoliberalism in Britain: an Ideational Institutional Approach' in John L. Campbell and Ove K. Pedersen eds. *The Rise of Neoliberalism and Institutional Analysis*. Princeton: Princeton University Press.

Hay, Colin (1999a) *The Political Economy of New Labour: Labouring under False Pretences?*. Manchester: Manchester University Press.

Hay, Colin (1999b) 'Crisis and Political Development in Postwar Britain', in David Marsh et al eds. *Postwar British Politics in Perspective*. Cambridge: Policy Press.

Hay, Colin (1999c) 'Continuity and Discontinuity in British Political Development', in David Marsh et al eds. *Postwar British Politics in Perspective*. Cambridge: Policy Press.

Hay, Colin; Wincott, Daniel (1998) 'Structure, Agency and Historical Institutionalism', *Political Studies*, XLVI, pp. 951-957.

Hay, Colin (1996) 'Narrating Crisis: The Discursive Construction of the Winter of Discontent', *Sociology* 30. 2, pp. 253-277.

Hay, Colin; Marsh, David (1999) 'Conclusion: Analysing and Explaining Postwar British Political Development', in David Marsh et al eds. *Postwar British Politics in Perspective*. Cambridge: Policy Press.

Hayes, Mark H; Victor, David G (2006) 'Politics, markets, and the shift to gas: insights from the seven historical cases', in David G Victor, Amy M Jaffe and Mark H Hayes eds. *Natural Gas and Geopolitics: From 1970 to 2040*. Cambridge: Cambridge University Press.

- Healey, Dennis (1980) 'Oil, Money and Recession', *Foreign Affairs* 58, pp. 217.
- Heinberg, Richard (2003) *The Party's Over*. Gabriola Island, British Columbia: New Society Publishers.
- Held, David (2006) 'Reframing Global Governance: Apocalypse Soon or Reform!', in *New Political Economy*, 11, 2, pp. 157-177.
- Helleiner, Eric (2004) 'Economic Liberalism and Its Critics: The past as Prologue?', *Review of International Political Economy* 10, 4, pp. 685-696.
- Helm, Dieter (2010) 'Government failure, rent-seeking, and capture: the design of climate change policy', *Oxford Review of Economic Policy*, 26, 2, pp. 182-196.
- Helm, Dieter (2007a) 'The New Energy Paradigm', in Dieter Helm ed. *The New Energy Paradigm*. Oxford: Oxford University Press.
- Helm, Dieter (2007b) The Russian Dimension and Europe's External Energy Policy: <http://www.dieterhelm.co.uk/node/655>
- Helm, Dieter (2005a) 'The Assessment: the New Energy Paradigm', *Oxford Review of Economic Policy* 21, 1, pp. 1-18.
- Helm, Dieter (2005b) *Securing Supplies and Meeting the Challenges of Climate Change*. A discussion paper for the 2005 Meeting of EU Heads of State at Hampton Court available at: <http://www.eu2005.gov.uk/servlet/Front?pagename=OpenMarket/Xcelerate/ShowPage&c=Page&cid=1107293391098&a=KArticle&aid=1119527321606>
- Helm, Dieter (2005c) *Climate Change and Energy Policy* in Dieter Helm ed. *Climate Change and Policy*. Oxford: Oxford University Press.
- Helm, Dieter (2003) *Energy, the state and the market*. Oxford: Oxford University Press.
- Helm, Dieter (1986) 'The Assessment: The Economic Borders of the State', *Oxford Review of Economic Policy* 2, 2, pp. i-xxiv.
- Helm, D. R.; Kay, J.; Thompson, D. (1989) *The Market for Energy*. Oxford: Clarendon Press.

Henley, Paul (2008) 'Energy hungry Europe warms to Norway, BBC News Online, Saturday, 30 August 2008. Available at: <http://news.bbc.co.uk/1/hi/world/europe/7588746.stm> (Last accessed September 2011).

Henney, Alex (1994) 'Energy markets and energy policies after the White Paper', *Energy Policy* January 1994.

HMG (Her Majesty's Government) (2011a) *The Carbon Plan*. Available at: http://www.decc.gov.uk/en/content/cms/tackling/carbon_plan/carbon_plan.aspx (Last accessed 17th August 2011)

HMG (2011b) *The 2010-11 Energy Bill*. Available at: http://www.decc.gov.uk/en/content/cms/legislation/energy_bill/energy_bill.aspx (Last accessed 17th August 2011).

HMG (2008a) *The 2008 Climate Change Act*. London: HMSO. Available at: <http://www.legislation.gov.uk/ukpga/2008/27/contents> (Last accessed 15th March 2011).

HMG (2008b) *The Energy Act*. London: HMSO. Available at: <http://www.legislation.gov.uk/ukpga/2008/32/contents> (Last accessed 16th March 2011).

HMG (2008c) *Planning Act 2008*. London: HMSO. Available at: <http://www.legislation.gov.uk/ukpga/2008/29/contents> (Last accessed September 2011)

HMG (2004) *Energy Act 2004*. London: The National Archives. Available at: <http://www.legislation.gov.uk/ukpga/2004/20/contents> (Last accessed 1st September 2011).

HMG (1989) *The Electricity Act*. London: HMSO.

HMG (1986) *The Gas Act*. London: HMSO.

HMG (1983) *The Energy Act*. London: HMSO.

HMG (1982) *Oil and Gas (Enterprise) Act*. London: HMSO.

Higgott, Richard; Erman, Eva (2010) 'Deliberative global governance and the question of legitimacy', *Review of International Studies* 36, 2, pp.449-470.

Hill, Fiona (2004) 'Energy Empire: Oil, Gas and Russia's Revival', *Foreign Policy Centre*, September 2004. Available at: <http://fpc.org.uk/fsblob/307.pdf> (Last accessed September 2011).

Hodge, (2010) 'Business leaders call for urgent action on green transport to counter oil crunch', *Greenwise* 10th February 2010. Available at: <http://www.greenwisebusiness.co.uk/news/business-leaders-call-for-urgent-action-on-green-transport-to-counter-oil-crunch-1136.aspx> (accessed 4th August 2011)

Hogan, William W. (2003) 'Foreword', in Carlos Rufin's *The Political Economy of Institutional Change in the Electricity Supply Industry*. Cheltenham, UK and Northampton, USA: Edward Elgar.

Homer-Dixon, T. (2009) *Carbon Shift: How the Twin Crises of Oil Depletion and Climate Change Will Define the Future*. New York: Random House.

Hope, Chris; Jones, Matthew; Owens, Susan (1987) 'New directions for UK energy policy?', *Energy Policy*, February 1987, pp. 5-6.

Hotton, Russell (2007) 'Gazprom: Russia's 'pipeline troops'', *The Daily Telegraph*, Wednesday, May 23, 2007.

House of Commons (2009) 'Further Report on Machinery of Government Changes', UK Parliament. Available at: <http://www.parliament.uk/business/committees/committees-a-z/commons-select/public-administration-select-committee/inquiries/former-inquiries/machinery-of-government/> (Last accessed 17th March 2011)

House of Commons (2008) 'Machinery of Government Changes: Further Report', *A House of Commons Public Administration Select Committee Report*. Available at: <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmpublicadm/514/514.pdf> (Last accessed 10th August 2011).

House of Commons (2007a) *Energy Security: Research Paper 07/42*. London: House of Commons Library.

House of Commons (2007b) *Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill, a report by the House of Commons Environmental Audit Committee*. London: TSO.

House of Commons (2007c) 'The Governance of Britain', *Presented to Parliament by the Secretary of State for Justice and Lord Chancellor by Command of Her Majesty July 2007*. London: HMSO. Available at: www.official-documents.gov.uk/document/cm71/7170/7170.pdf (Last accessed 17th March 2011).

House of Commons (2007d) 'Evidence submitted by the Confederation of British Industry to the Foreign Affairs Select Committee'. London: TSO. Available at: <http://www.parliament.the-stationery-office.co.uk/pa/cm200708/cmselect/cmfaff/51/51we17.htm> (Last accessed 19th October 2008)

House of Commons (2006) *UK response to the Commission Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy*. London: House of Commons.

House of Commons (2003) 'Energy White Paper – Empowering Change?', *Eighth Report of Session 2002-3 of the House of Commons Environmental Audit Committee*. London: TSO.

House of Lords (2006) 'The Commission's Green Paper, "A European Strategy for Sustainable, Competitive and Secure Energy". Report with Evidence', *House of Lords*, 25 July 2006. London: The Stationary Office.

House of Lords (2002) 'EU Russia Relations', *House of Lords Select Committee on the European Union, 3rd Report*. Available at: <http://www.publications.parliament.uk/pa/ld200203/ldselect/ldeucom/29/2908.htm#part7> (Last accessed 10th November 2010).

Hudson, Pat (1992) *The Industrial Revolution*. London: Edward Arnold.

Interfax (2003) *Interfax is the main information partner at London Energy Conference*. Available at: <http://www.interfax.com/12/133768/press.aspx> (Last accessed August 2009)

IEA (International Energy Agency) (2007) *Energy Policies of IEA Countries. The United Kingdom 2006 Review*. Paris: IEA.

IEA (2006a) *Report on UK Energy*. Available at: <http://www.iea.org/Textbase/publications> (Last accessed November 2009).

IEA (2006b) 'World Energy Outlook 2006', *International Energy Agency*. Available at:

http://www.iea.org/publications/free_all.asp (accessed 10th November 2010).

IEA (1998) *Energy Policies of IEA Countries: The United Kingdom 1998 Review*. Paris: OECD/IEA

IPPR (Institute of Public Policy Research); WWF; RSB (Royal Society for the Protection of Birds) (2007) *80% Challenge: Delivering a low-carbon UK*. London: IPPR.

ITPOES (2010) 'The Oil Crunch: A Wake-up Call for the UK Economy', *Second report of the UK Industry Taskforce on Peak Oil & Energy Security*. London: ITPOES. Available at: www.peakoiltaskforce.net

ITPOES (2008) 'The Oil Crunch: Securing the UK's energy future', *First report of the UK Industry Taskforce on Peak Oil and Energy Security*. London: ITPOES.

Isiah III, Wilson (2008) 'The Arc of Instability and Energy Predation', a paper presented at the *International Studies Association (ISA) Conference 2008*, San Francisco.

Jacobs, Michael (1991) *The Green Economy: Environment, Sustainable Development and the Politics of the Future*. London and Colorado: Pluto Press.

Jacobsen, John Kurt (1995) 'Much Ado About Ideas: The Cognitive Factor in Economic Policy', *World Politics* 47, 2, pp. 283-310.

Jaffe, Amy M.; Hayes, Mark H.; Victor, David G. (2006) 'Conclusions', in David G Victor, Amy M Jaffe and Mark H Hayes eds. *Natural Gas and Geopolitics: From 1970 to 2040*. Cambridge: Cambridge University Press.

James A. Baker III Institute for Public Policy (2001) 'Strategic Energy Policy Challenges for the 21st Century', report of an Independent Task Force, Houston: James A. Baker III Institute for Public Policy, Rice University, and the Council on Foreign Relations.

Jegen, Maya (2009) 'Framing Energy Security: The Case of the European Union', Conference Paper for *the ISA Convention 2009*, New York.

JESS (Joint Energy Security of Supply Working Group) (2006) 'Long-Term Security of Energy Supply', a DTI Report. London: DTI. Available at: www.dti.gov.uk/energy/energy-reliability/index.html (Last accessed November 2009).

- JESS (2002) *Joint Energy Security of Supply Working Group (JESS): First Report, June 2002*. London: DTI and Ofgem.
- Jha, A (2009) 'UK 'will struggle' to meet 2020 renewables goal', *The Guardian*, 30 April 2009.
- Kaldor, Mary; Karl, Terry Lynn; Said, Yahia (2007) *Oil Wars*. London and Ann Arbour: Pluto Press.
- Kalicki, J.; Goldwyn, D. (2005) *Energy and Security: Toward a New Foreign Policy Strategy*. Washington DC: Woodrow Wilson Center Press.
- Karki, Shankar; Mann, Michael; Salehfar, Hossein (2005) 'Energy and the environment in the ASEAN: challenges and opportunities', *Energy Policy*, 33, 4, pp. 499-509.
- Katzenstein, Peter (1978) 'Conclusion: Domestic Structures and Strategies of Foreign Economic Policy' in Katzenstein, Peter ed. *Between Power and Plenty: Foreign Economic Policies of Advanced Industrial States*. Wisconsin: The University of Wisconsin Press.
- Kaufmann, R. K., Ullman, B. (2009) 'Oil Prices, Speculation and Fundamentals: Interpreting Causal Relations Among Spot and Futures Prices', *Energy Economics*, 31, pp. 550-8.
- Keay, Malcolm (2010) 'Can the Market Deliver Security and Environmental Protection in Electricity Generation?', in Ian Rutledge and Philip White eds. *UK Energy Policy and the End of Market Fundamentalism*. Oxford: Oxford Institute for Energy Studies.
- Keegan, William (1985) *Britain Without Oil*. Harmondsworth and New York: Penguin Books Ltd and Viking Penguin Inc..
- Kemp, Alexander G; Stephen, Linda (2007) 'UK Oil and Gas Depletion Policy with Growing Import Dependence' in David Helm ed. *The New Energy Paradigm*. Oxford: Oxford University Press.
- Kendal, Bridget (2007) 'Russia: The beggar becomes the belligerent', *New Statesman*, 11 June 2007.
- Kennedy-Pipe, Caroline (1998) *Russia and the World 1917-1991*. London: Arnold.

Keohane, Robert (2009) 'The Old IPE and the New', *Review of International Political Economy* 16, 1, pp. 34-46.

Keohane, Robert (1984) *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press (2005 edition).

Kern, Florian (2009) 'The politics of governing 'system innovations' towards sustainable electricity systems'. A thesis submitted in September 2009 to the *Science and Technology Policy Research department of the University of Sussex*. Available at: http://eprints.sussex.ac.uk/2362/01/Kern%2C_Florian.pdf (Last accessed: 10th June 2011).

Kesicki, Fabian (2010) 'The Third Oil Price Surge: What's Different This Time?', *Energy Policy* 38, 3, pp. 1596-1606.

Keynes, John Maynard (1997) *The General Theory of Employment, Interest, and Money*. New York: Prometheus Books.

Kirkup, Nicola (2006) 'Securing the UK's Energy Requirements', a presentation made by a member of the Energy Markets Unit, DTI in July 2006 to Gloucestershire County Council.

Klapp, Merrie Gilbert (1987) *The Sovereign Entrepreneur: Oil Policies in Advanced and Less Developed Capitalist Countries*. Ithaca and London: Cornell University Press.

Klare, Michael (2008a) *Rising Powers, Shrinking Planet: How Scarce Energy is Creating a New World Order*. Oxford: Oneworld Publications.

Klare, Michael T. (2008b) 'Petroleum Anxiety and the Militarization of Energy Security'. Paper presented at the *International Studies Association (ISA) Conference 2008*, San Francisco.

Klare, Michael T (2001) *Resource Wars: the New Landscape of Global Conflict*. New York: Metropolitan Books.

Klein, Naomi (2008) *The Shock Doctrine: The Rise of Disaster Capitalism*. London: Penguin Group

Kuhn, Thomas (1962) *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Kunstler, James H. (2005) *The Long Emergency: Surviving the End of the Oil Age, Climate Change and Other Converging Catastrophes*. Atlantic Monthly Press.

Kuzemko, Caroline (2012 (forthcoming) 'Energy Policy in Transition: Sustainability with Security', in Caroline Kuzemko, Andrei Belyi, Andreas Goldthau and Michael Keating eds. *Dynamics of Energy Governance in Europe and Russia*. London: Palgrave Macmillan.

Labban, Mazen (2010) 'Oil in Parallax: Scarcity, Markets and the Financialisation of Accumulation', *Geoforum*, 41: 4, pp. 541-52.

Labour Party (1997) *Labour Party Manifesto: New Labour because Britain deserves better*. Available at: <http://www.labour-party.org.uk/manifestos/1997/1997-labour-manifesto.shtml>

Lang, Karl; Lang, Philipp; Bauer, Christian; Duranton, Christophe; Wieder, Thomas; Huber, Stephan; Lang, Florian (2005) 'Mechanisms of Suicidal Erythrocyte Death', *Cellular Physiology and Biochemistry* 15, 5, pp. 195-202.

Larsen, Christian; Andersen, Jorgen (2009) 'How New Economic Ideas Changed the Danish Welfare State: The Case of Neoliberal Ideas and Highly Organized Social Democratic Interests', *Governance: An International Journal of Policy, Administration, and Institutions*, 22, 2, pp. 239-261

Lawson, Nigel (1989) *Energy Policy: the Text of a Speech Given in 1982*. Oxford: Clarendon Press.

Lawson, Nigel (1980) *The New Conservatism*. London: Centre for Policy Studies.

Leake, Jonathan (2005) 'Interview – Malcolm Wicks', *New Statesman*, 03 October 2005. Available at: <http://www.newstatesman.com/200510030059> (Last accessed 4th August 2011).

Leaver, R.L. (2007) 'Australia and Asia-Pacific energy security: the rhymes of history' in Michael Wesley ed. *Energy Security in Asia*. Oxon, UK: Routledge, pp. 91-111.

Le Billon, Philippe (2005) *Fuelling War: Natural Resources and Armed Conflict*. Routledge for the International Institution for Strategic Studies. Available at: <http://www.geog.ubc.ca/~lebillon/adelpi357.pdf> (Last accessed 19th October 2008)

Lee, Donna (2004) 'The Growing Influence of Business in U.K. Diplomacy' in *International Studies Perspectives* 5, 50–54.

Lee, Julian (2007) 'The UK-Russia Energy Relationship' in Andrew Monaghan ed. *The UK and Russia: A Troubled Relationship Part 1* for the Conflict Studies Research Centre:
<http://www.defac.ac.uk/colleges/csrc>.

Leggett, Jeremy (2005) *Half Gone: Oil, Gas, Hot Air and the Global Energy Crisis*. Portobello Books.

Lehman, P. J.; Hough, D. W. (1983) 'Communications on energy: UK energy 1970-2000: facts and fantasies', *Energy Policy*, September 1983, pp. 267.

Lesage, Dries; Van de Graaf, Thijs; Westphal, Kirsten (2010) *Global Energy Governance in a Multipolar World*. Surrey, England; Burlington, USA.

Light, Margot (2006) 'Russia's Political Engagement with the EU' in Roy Allison, Margot Light and Alex White eds. *Putin's Russia and the Enlarged Europe*. Oxford: Blackwell Publishing.

Lindstrom, Nicole; Buller, Jim (2011) 'Hedging its Bets: the UK and the Politics of European Financial Services Regulation', a *GR:EEN working paper*. Available at:
http://www2.warwick.ac.uk/fac/soc/csgr/green/papers/workingpapers/buller_and_lindstrom-_hedging_its_bets.pdf (Last accessed September 2011).

Littlechild, Stephen (1981) 'Ten Steps to Denationalisation', *Journal of Economic Affairs* 2, 1, pp. 11-19.

Littlechild, S. C.; Vaidya K. G. (1982) *Energy Strategies for the UK*. London: George, Allen and Unwin.

Locatelli, Catherine (2006) 'The Russian oil industry between public and private governance: obstacles to international oil companies' investment strategies', *Energy Policy* 34 (2006), pp. 1075-1085.

Lucas, Edward (2009) *The New Cold War: How the Kremlin Menaces Both Russia and the West*. London: Bloomsbury Publishing.

- Lucas, Nigel (1985) *Western European Energy Policies: A Comparative Study of the Influence of Institutional Infrastructure on Technical Change*. Oxford: Clarendon Press.
- Luft, Gal; Korin, Anne; Gupta, Eshita (2011) 'Energy security and climate change: A tenuous look', in Benjamin J. Sovacool ed. *The Routledge Handbook of Energy Security*. Abingdon and New York: Routledge.
- Luft, Gal; Korin, Anne (2009) 'Realism and Idealism in the Energy Security Debate', in Gal Luft and Anne Korin eds. *Energy Security Challenges for the 21st Century*. Santa Barbara, California; Denver, Colorado; Oxford, England: Praeger Security International.
- Lugar, Richard; Woolsey, James (1999) *The New Petroleum*.
- Mabey, Nick; Mitchell, John (2010) 'Investing for an Uncertain Future: Priorities for UK Energy and Climate Security', A *Chatham House Briefing Paper*. London: Chatham House.
- Macalister, Terry (2010) 'Britain's energy policy goes back to the future', *Guardian*, Wednesday 3 February 2010. Available at: <http://www.guardian.co.uk/environment/2010/feb/03/ofgem-report-analysis?INTCMP=ILCNETTXT3487> (Accessed 18th March 2011).
- Magueri, Leonardo (2006) 'Two Cheers for Expensive Oil', *Foreign Affairs*, March/April 2006, pp. 149-161.
- Mahoney, James (2000) 'Path Dependence in Historical Sociology', *Theory and Society* 29, pp. 507-548.
- Mahoney, James; Thelen, Kathleen (2010) *Explaining Institutional Change: Ambiguity, Agency, and Power*. Cambridge: Cambridge University Press.
- Marsh, David (1999) 'Introduction: Explaining Change in the Postwar Period' in David Marsh et al eds. *Postwar British Politics in Perspective*. Cambridge: Policy Press.
- McDonald, Matt (2008) 'Securitization and the Construction of Society', *European Journal of International Relations* 14, 4, pp. 563-587.

- McGowan, Francis (2008) 'Can the European Union's Market Liberalism Ensure Energy Security in a Time of 'Economic Nationalism'?', *Journal of Contemporary European Research* 4, 2, pp. 90-106.
- McLean, Bethany; Elkind, Peter (2003) *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron*. London: Penguin Books.
- McLean, Iain (2006) *Adam Smith, radical and egalitarian: an interpretation for the 21st Century*. Edinburgh: Edinburgh University Press.
- McNamara, Kathleen (1998) *The currency of ideas: monetary politics in the European Union*. New York: Ithaca; London: Cornell University Press.
- Meadows, D. H.; Meadows, D. L.; Randers, J.; Behrens, W. W. III (1972) *The limits to growth: a report for the Club of Rome's project on the predicament of mankind*. London: Earth Island.
- Miliband, Ed (2010) 'Building a Low Carbon Economy: the UK's Contribution to Tackling Climate Change'. Excerpt from a *Speech to the Climate Change Commission*. Available at: <http://www.theccc.org.uk/audio-and-video/video> (Last accessed 1st September 2011).
- Miliband, Ed (2008) 'The Rise and Fall and Rise Again of a Department of Energy', speech given at Imperial College, London, on 9th December 2008. Available at: www.decc.gov.uk/.../1_20090408161742_e_@@_milibandspeechimperial091208.pdf (accessed 05/10/10)
- Ministry of Energy of the Russian Federation (2003) *The Summary of the Energy Strategy of Russia for the Period up to 2020* at: http://ec.europa.eu/energy/russia/events/doc/2003_strategy_2020_en.pdf (accessed 19/10/08)
- Mitchell, Catherine (2008) *The Political Economy of Sustainable Energy*. Basingstoke and New York: Palgrave Macmillan.
- Mitchell, Catherine (2004) 'Energy Policy for a Sustainable Future', *Energy Policy* 32; 17 pp. 1887-1889.
- Mitchell, Catherine (2000) 'The England and Wales Non-Fossil Fuel Obligation: History and Lessons', *Annual Review of Energy and Environment* 2000, pp. 285-312.

Mitchell, C., Bauknecht, D. et al (2006) 'Effectiveness through risk reduction: a comparison of the renewable obligation in England and Wales and the feed-in system in Germany', *Energy Policy* 34, 3, pp. 297-305.

Mitchell, Catherine; Conner, Peter (2004) 'Renewable energy policy in the UK 1990-2003', *Energy Policy* 32, 17, pp. 1935-1947.

Mitchell, John (2002) 'Renewing Energy Security', *RIIA Working Paper*, London: Royal Institute of International Affairs. Available at: <http://www.chathamhouse.org/publications/papers/view/107550> (Last accessed 30th August 2011).

Mitchell, John ed. (1998) *Companies in a World of Conflict: NGOs, Sanctions, and Corporate Responsibility*. London: Earthscan.

Mitchell, J; Morita N.; Selley, N. And Stern, J. (2001) *The New Economy of Oil: Impacts on Business, Geopolitics and Society*. London: Royal Institute for International Affairs.

Mommer, B. (2000) *The Governance of International Oil: the Changing Rules of the Game*. Oxford: Oxford Institute for Energy Studies, WPM 26.

Monaghan, Andrew (2009) 'Challenges and Opportunities for an EU Foreign Energy Policy', a *Briefing Paper for the European Parliament's Committee on Foreign Affairs*. Brussels: European Parliament.

Moran, M. (2003) *The British Regulatory State*. Oxford: Oxford University Press.

Morrison, Kevin (2006) 'Upward bound? Why commodity bulls are undeterred', *Financial Times*, May 23, 2006. Available with subscription at: [http://www.ft.com/cms/s/0/a1f94754-
ea11-11da-a33b-0000779e2340.html#axzz14yvTpMSD](http://www.ft.com/cms/s/0/a1f94754-
ea11-11da-a33b-0000779e2340.html#axzz14yvTpMSD) (Last accessed November 11th 2010).

Morse, Edward and Myers-Jaffe, Amy (2002) 'Strategic Energy Policy Challenges for the 21st Century', report of an Independent Task Force, Houston: James A Baker III Institute for Public Policy, Rice University, and the Council on Foreign Relations. Available at: <http://www.bakerinstitute.org/publications/strategic-energy-policy-challenges-for-the-21st-century-complete-text-of-the-report-by-the-independent-task-force/view?searchterm=strategic+energy+policy> (Last accessed November 2010).

Mügge, Daniel (2011) 'From Pragmatism to Dogmatism: European Union Governance, Policy Paradigms and Financial Meltdown', *New Political Economy*, 16, 2, pp. 185-206.

Myers-Jaffe, Amy (2005) 'The Outlook for Future Oil Supply from the Middle East and Price Implications', speech, Tokyo, July 2005, *James Baker III Institute for Public Policy*, Rice University. Available at:
<http://www.bakerinstitute.org/programs/energy-forum/publications/docs/PECJaffeOilspeech.pdf/view?searchterm=the+outlook+for+future+oil+supply> (Last accessed 1st September 2011)

National Archives: 'The Department of Energy 1974-1992:
<http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/about/aboutus/history/outlines/The%20Department%20of%20Energy%201974%20-%201992/page24456.html> (Last accessed 29th December 2010)

NDC (National Defence Council) (2010) 'Fact Sheet 19: Energy, Resources and Climate Change', part of the Strategic Defence and Security Review. Available at:
<http://www.cabinetoffice.gov.uk/resource-library/strategic-defence-and-security-review-securing-britain-age-uncertainty> (Last accessed 1st June 2011).

Natorski, Michal; Surralles, Anna Herranz (2008) 'Securitizing Moves to Nowhere? The Framing of the European Union Energy Policy', *Journal of Contemporary European Research* 4, 2, pp. 71-89.

New Labour (1997) New Labour because Britain deserves better. *1997 Labour party election manifesto*. Available at: <http://www.labour-party.org.uk/manifestos/1997/1997-labour-manifesto.shtml>

Newell, Peter (2008) 'The political economy of global environmental governance' in *Review of International Studies* 34, 3, pp. 507-530.

Newell, Peter; Patterson, Matthew (2010) *Climate Capitalism: Global Warming and the Transformation of the Global Economy*. Cambridge: Cambridge University Press.

Niblett, Robin (2011) *The Chatham House YouGov Survey 2011*. London: Chatham House. Available at: <http://www.chathamhouse.org/publications/papers/view/176813> (Last accessed 9th August 2011)

Noel, Pierre; Pollitt, Michael (2010) 'Don't lose power', *Parliamentary Brief Online*, Friday 23rd July 2010.

Number 10 (2003) 'Press Conference with the Prime Minister and President Putin of Russia', Notes on the Press Conference for Number10.gov.uk. Available at: <http://www.number10.gov.uk/Page4039> (Last accessed April 2010).

Nuttall, William; Manz, Devon (2008) 'A new energy security paradigm for the twenty-first century', *Technological Forecasting & Social Change*, 75, pp. 1247-1259.

Ochs, Alexander (2008) 'Overcoming the lethargy: climate change, energy security, and the case for a third industrial revolution', *AICGS Policy Report 34*. Baltimore: the American Institute for Contemporary German Studies.

O'Connor, Harvey (1962) *The World Crisis in Oil*. London: Elek Books.

O'Hanlon, Michael (2010) 'How Much Does the United States Spend Protecting Persian Gulf Oil?', in Carlos Pascual and Jonthan Elkind eds. *Energy Security: Economics, Politics, Strategies and Implications*. Washington DC: Brookings Institution Press.

Odell, Peter (1980) *British oil policy: a radical alternative: a report based on a study made for the Department of Energy and submitted to the Secretary of State in March 1979*. London: Kogan Page.

Offerdahl, Kristine (2007) 'European Energy Security: Oil and Gas Supplies from the Russian Arctic: Powerful Actors and Diverging Interests', Paper for the *International Studies Association 48th Annual Convention*, Chicago.

Ofgem (2010a) 'Project Discovery: Options for delivering secure and sustainable energy supplies', an *Ofgem consultation document*. London: Ofgem. Available at: <http://www.ofgem.gov.uk/markets/whlmkts/discovery/Pages/ProjectDiscovery.aspx> (Last accessed 1st September 2011).

Ofgem (2010b) 'Action needed to Ensure Britain's Energy Supplies Remain Secure', *Ofgem Press Release*, 3 February 2010.

Ofgem (2009) 'Project Discovery: Energy Market Scenarios', an *Ofgem consultation document*. London: Ofgem.

Ofgem (2008) *Energy Supply Markets Probe – Call for Evidence*. London: The Office of Gas and Electricity Markets. Available at: www.ofgem.gov.uk.

Ofgem (2006) *Sustainable Development Report 2006*. London: Ofgem. Available at: www.ofgem.gov.uk/Sustainability/Pages/Sustain.aspx (Last accessed 7th September 2011).

Ofgem (2004) *Environmental Action Plan. Annual Review 2003/4*. Office of the Gas and Electricity Markets.

Oliveira, Adilson; MacKerron, Gordon (1992) 'Is the World Bank approach to structural reform supported by experience of electricity privatization in the UK?', *Energy Policy* February 1992, pp. 153-162.

Oliver, Michael and Pemberton, Hugh (2004) 'Learning and Change in 20th-Century British Economic Policy', in *Governance: An International Journal of Policy, Administration, and Institutions*, 17, 3, pp. 415-441.

Ostrovsky, Arkady (2006) 'Oil and gas bring influence', *Financial Times Special Report on Russia*, Friday April 21, 2006, p. 5.

Painter, David (2002) 'Oil', in Alexander DeConde, Fredrik Logevall, and Richard Dean Burns eds. *Encyclopaedia of American Foreign Policy*, 2nd ed. New York: Charles Scribner's Sons.

Painter, David (1997) 'Oil' in *Encyclopaedia of American Foreign Policy* 2, 3, pp. 1–20.

Painter, David (1993) 'Oil and World Power', *Diplomatic History* 19, 3, pp. 525-548.

Parra, Francisco (2004) *Oil Politics: a Modern History of Petroleum*. London and New York: I. B. Taurus & Co. (2010 edition).

Paskal, Cleo (2009) 'UK National Security and Environmental Change', *A policy brief for the ippr Commission on National Security for the 21st Century*. London: Institute for Public Policy Research.

Paterson, Matthew; Humphreys, David; Pettiford, Lloyd (2003) 'Understanding Global Environmental Governance: From Interstate Regimes to Counter-Hegemonic Struggles', in *Global Environmental Politics*, 3, 2, pp. 1-10.

Pirani, Simon (2007) 'Ukraine's Gas Sector', a paper for the *Oxford Institute for Energy Studies*. Oxford: Oxford Institute for Energy Studies.

PIU (2002) *The Energy Review*. A Performance and Innovation Unit Report. London: Cabinet Office. Available at: <http://www.gci.org.uk/Documents/TheEnergyReview.pdf> (Last accessed 1st September 2011).

Plesch, Dan; Austin, Greg; Grant, Fiona (2005) 'Britain's Energy Future: Securing the 'Home Front''. Paper for the *Foreign Policy Centre*. Available at: <http://fpc.org.uk/articles/> (Last Accessed November 2009).

Porter (2005) 'Is UK oil output running on empty?', *BBC Online*. Available at: <http://news.bbc.co.uk/1/hi/business/4402448.stm> (Last accessed January 2011).

POST (Parliamentary Office of Science and Technology) (2004) *The Future of UK Energy Supplies*, Postnote, October 2004, Number 230.

Powell, Bill (2008) 'Just How Scary is Russia?', *Fortune*, September 15, 2008.

Quiros, Alberto (1980) 'Energy and the Balance of Political Power', in Robert Mabro ed. *World Energy Issues and Policies*. Oxford: Oxford University Press.

Rachman, Gideon (2008) 'Illiberal Capitalism: Russia and China chart their own course', *Financial Times*, Wednesday January 9 2008.

Ragwitz, Mario; Resch, Gustav; Faber, Thomas; Huber, Claus (2005) 'Monitoring and evaluation of policy instruments to support renewable electricity in EU Member States', a research project funded by the *German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety*. Available at: http://www.bmu.de/english/renewable_energy/downloads/doc/36432.php (Last accessed 1st September 2011).

Raszewski, Slawomir (2012 forthcoming) 'Security and the Economics of Energy in Eastern Europe', in Caroline Kuzemko, Andrei Belyi, Andreas Goldthau and Michael Keating eds. *Dynamics of Energy Governance in Europe and Russia*. London: Palgrave Macmillan.

- Rayner, Steve (2009) 'Trust and the transformation of energy systems', *Energy Policy* 38, 6, pp. 2617-2623.
- Reihing, A. (2007) 'Energy Security Depends on Where you Live', *Policy Innovations*, Carnegie Council.
- Roberts, Alisdair (2010) *The Logic of Discipline: Global Capitalism and the Architecture of Government*. Oxford: Oxford University Press.
- Roberts, Paul (2004) *The End of Oil: the decline of the petroleum economy and the rise of a new energy order*. London: Bloomsbury Publishing Plc.
- Robinson, Anthony (2006) 'Russia's pipeline politics', *Prospect*, 22nd July 2006. Available at: <http://www.prospectmagazine.co.uk/2006/07/russiaspipelinepolitics/> (Last accessed November 11th 2010).
- Robinson, C (1981) 'The errors of North Sea policy', in *Lloyds Bank Review*, July, no. 141.
- Robinson, C.; Marshall, E (1981) 'What Future for British Coal? Optimism or Realism on the Prospects to the Year 2000', *Hobart Paper 89*. London: Institute of Economic Affairs.
- Rodgers, Paul (2007) 'Gas: who controls the tap?', in *Newstatesman*, 2nd July 2007, pp. 4-8.
- Rodriguez, Frank (1987) 'UK government control and the electricity supply industry since 1980', *Energy Policy*, October 1987.
- Rogers, Paul (2007) 'Gas: who controls the tap?', in *Newstatesman*, July 2007
- Romanova, Tatiana (2008) 'The Russian Perspective on the Energy Dialogue', *Journal of Contemporary European Studies*, 16, 2, pp. 219 – 230.
- Rosenau, James N.; Czempiel, Ernst-Otto (1992) *Governance without government: order and change in world politics*. Cambridge: Cambridge University Press.
- RAE (Royal Academy of Engineering) (2002) *An Engineering Appraisal of the Policy and Innovation Unity's Energy Review*. London: Royal Academy of Engineering.

RCEP (2000) 'Energy – the Changing Climate', the *Twenty-second Report of the Royal Commission on Environmental Pollution*. London: HMSO.

Rufin, Carlos (2003) *The Political Economy of Institutional Change in the Electricity Supply Industry*. Cheltenham, UK; Northampton, MA, USA: Edward Elgar.

Ruggie, John Gerard (1982) 'International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order', *International Organization* 36, 2, pp. 379-415.

Runciman, W.G. (1969) *Social Science and Political Theory*. Cambridge: Cambridge University Press

Russell, James (2008) ' Militarization of Energy Security', a paper for the *International Studies Association Annual Conference*, San Francisco.

Rutland, Peter (2008) 'Russia as an Energy Superpower', *New Political Economy* 13, 2, pp. 203-10.

Rutland, Peter (2006) 'Oil and Politics in Russia', Paper prepared for the *American Political Science Association* annual convention, Philadelphia 2006. An Oxera Agenda paper accessed at: <http://www.oxera.com/main.aspx?id=8643>

Rutledge, Ian (2010) 'UK Energy Policy and Market Fundamentalism: A Historical Overview', in Ian Rutledge and Philip Wright eds. *UK Energy Policy and the End of Market Fundamentalism*. Oxford: Oxford Institute for Energy Studies.

Rutledge, Ian (2007) 'New Labour, energy policy and 'competitive markets'', *Cambridge Journal of Economics*, 31, pp. 901.

Rutledge, Ian (2005) 'US appears to have fought war for oil and lost it', *The Financial Times*, April 11 2005. Available at: <http://www.ft.com/cms/s/0/a0bb7970-aa25-11d9-aa38-00000e2511c8.html#axzz1XLnqKVd5> (Last accessed 8th September 2011).

Rutledge, Ian; Wright, Philip (2010) 'The Content and Delivery of Future UK Energy Policy', in Ian Rutledge and Philip Wright eds. *UK Energy Policy and the End of Market Fundamentalism*. Oxford: Oxford Institute for Energy Studies.

Sauter, R; Watson, J. (2007) 'Strategies for the deployment of micro-generation: implications for social acceptance', *Energy Policy* 35, 5, pp. 2770-9.

Schmidt, V. A. (2008) 'Discursive Institutionalism: The Explanatory Power of Ideas and Discourse', *Annual Review of Political Science* 11, 1, pp. 303-326.

Schmidt, V. A. (2006) *Democracy in Europe: The EU and National Politics*. Oxford: Oxford University Press.

Schmidt, V.A. (2001) 'The politics of economic adjustment in France and Britain: when does discourse matter?', *New Political Economy* 8, 1, pp. 127-46.

Schmidt, V.A. and Radaelli, C. M. (2004) 'Policy Change and Discourse in Europe: Conceptual and Methodological Issues', *West European Politics*, 27, 2: 183-210.

Scrase, Ivan; Wang, Tao; MacKerron, Gordon; McGowan, Francis; Sorrell, Steve (2009) 'Introduction: Climate Policy is Energy Policy, in Ivan Scrase and Gordon MacKerron eds. *Energy for the Future: A New Agenda*. Basingstoke: Palgrave Macmillan

Sentence, Andrew (2009) 'Energy and Environmental Challenges in the New Global Economy', A speech by Andrew Sentence, Member of the Monetary Policy Committee, Bank of England at the *British Institute of Energy Economics' Sustainable Energy Seminar*, 21 September 2009.

Sevastiyarov, Sergey (2007) 'The More Assertive and Pragmatic New Energy Policy (NEP) in Putin's Russia: Security Implications for Eurasia and Northeast Asia', Paper for the International Studies Association Annual Convention, Chicago

Sherr, James (2009) 'Europe, Russia, Ukraine and Energy', *The World Today*, February 2009.

Simmons, Matthew R. (2005) *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy*. John Wiley.

Simpson, Emma (2006) 'Russia wields the energy weapon', BBC News Channel, 14 February 2006. Available at: <http://news.bbc.co.uk/1/hi/world/europe/4708256.stm> (Accessed 18th March 2011).

Sinclair, Timothy J. (1996) 'Beyond International Relations Theory: Robert W. Cox and Approaches to World Order', in Robert W. Cox and Timothy J. Sinclair *Approaches to World Order*. Cambridge: Cambridge University Press.

Smith, Rebecca; Emshwiller, John (2003) *24 Days: How two Wall Street Journal reporters uncovered the lies that destroyed faith in corporate America*. New York: Harper Collins.

Smith, Steve (1987) 'Paradigm dominance in international relations: The development of international relations as a social science', in *Millennium: Journal of International Studies*, 16, pp. 189-206.

Sornette, D., Woodward, R., Zhan, W-X (2009) 'The 2006-2008 Oil Bubble: Evidence of Speculation and Prediction', *Physica A: Statistical Mechanics and its Application*, 388, 8, pp. 1571-6.

Sorrell, Steve; Speirs, James; Bentley, Roger; Brandt, Adam; Miller, Richard (2009) 'Global Oil Depletion: An Assessment of the Evidence for a Near Term Peak in Oil Supply', a report completed by the Technology and Policy Assessment function of the *UK Energy Research Centre*. Available at: <http://www.ukerc.ac.uk/support/Global%20Oil%20Depletion> (Last accessed November 2010).

Spero, J.E. and J.A. Hart (1997). *The Politics of International Economic Relations*. 5th ed. Routledge.

Stanislaw, Joseph (2006) *Energy in Flux: the 21st Century's Greatest Challenge*. Switzerland: Deloitte Touche Tohmatsu.

Stanislaw, Joseph (2004) 'Energy Competition or Co-operation: Shifting the Paradigm', *Economic Perspectives* 9, 2, pp. 17-20.

Stern, Jonathan (2006) 'Home Fires Burning'. *Parliamentary Brief*, April 2006.

Stern, Jonathan (2004) 'UK gas security: time to get serious', *Energy Policy* 32 (2004), pp. 1967-1979.

Stern, Jonathan (1987) 'UK energy issues 1987-92', *Energy Policy*, December 1987, pp. 498-502.

- Stern, N. (2006) 'Stern Review on the Economics of Climate Change', *HM Treasury*, London.
- Stevens, Paul (2008) 'The Coming Oil Supply Crunch', a report for *Chatham House*. Available at:
http://www.chathamhouse.org.uk/files/11937_0808oilcrunch.pdf
- Stiglitz, Joseph (2002) *Globalization and its Discontents*. London and New York: The Penguin Press.
- Strandberg, Urban (2010) 'Energy supply and security policy – in the need of transnational institutions', *Energy Policy* 38, 3, pp. 1227-1228.
- Stone, Deborah A. (1989) 'Causal Stories and the Formation of Policy Agendas', *Political Science Quarterly* 104, 2, pp. 281-300.
- Strange, Susan (1988) *States and Markets*. London: Pinter.
- Streeck, Wolfgang and Thelen, Kathleen (2005) *Beyond Continuity: Institutional Change in Advanced Political Economies*. Oxford: Oxford University Press.
- SDC (Sustainable Development Commission) (2005) *Climate Change Programme Review*, the submission of the Sustainable Development Commission to MM Government, May 2005. London: Sustainable Development Commission.
- Stubbs, Richard and Geoffrey R.D. Underhill (1994). *Political Economy and the Changing Global Order*. Oxford University Press.
- Thatcher, Margaret (1995) *The Downing Street Years*. London: Harper Collins.
- Thelen, Kathleen (2009) 'Institutional Change in Advanced Political Economies', *British Journal of Industrial Relations* 47, 3, pp. 471-498.
- Thomas, Steve (2006) 'The British Model in Britain: Failing slowly', *Energy Policy* 34, pp. 583-600.
- Tickner, Ann (1993) 'States and Markets: An Ecofeminist Perspective on International Political Economy', *International Political Science Review* 14, 1, pp. 59-69.

- Times, The (2006) 'A Deal is a Deal: Russia Threatens the West at its Peril', in *The Times*, Friday, September 22nd 2006.
- Timmins, Graham (2006) 'Bilateral Relations in the Russia-EU Partnership: the British View' in Hanna Smith (ed.) *The Two-level Game: Russia's Relations with Great Britain, Finland and the European Union*. Helsinki: Kikumora Publications.
- Timney, Mary M. (2004) *Power for the People: Protecting States' Energy Policy Interests in an Era of Deregulation*. New York: M.E. Sharpe.
- Toke D.; Lauber V. (2007) 'Anglo-Saxon and German approaches to neoliberalism and environmental policy: the case of financing renewable energy', *Geoforum* 38, 4, pp. 677-687.
- Tretault, Mary Ann (2009) 'La Longue Duree and Energy Security in the Gulf', *British Journal of Middle Eastern Studies* 36, 3, pp. 375-93.
- Tutton, Tim (2009) 'The (potentially) topsy-turvey world of energy regulation: RPI-X@20 and Project Discovery' *OXERA*, an *Oxera Agenda piece*. Available at: www.oxera.com (Last accessed 23rd December 2010).
- Umbach, Frank (2010) 'Global Energy Security and the Implications for the EU' in *Energy Policy* 38, pp. 1229-1340.
- van der Horst, Dan (2005) 'UK biomass energy since 1990: the mismatch between project types and policy objectives', *Energy Policy* 33 (2005) pp. 705-716.
- Venn, Fiona (1986) *Oil Diplomacy in the Twentieth Century*. Basingstoke: Macmillan Education Ltd.
- Victor, David (2006) 'Gas and oil do not mix in the chaotic world of energy policy', *Financial Times*, May 9 2006.
- Vogler, John (2000) *The Global Commons: Environmental and Technological Governance*. Chichester: John Wiley & Sons.
- Wæver, Ole (1995) 'Securitization and Desecuritization', in Ronnie D. Lipschutz ed. *On Security*. New York: Columbia University Press.

Wagstyl, Stefan (2006) 'The country may look strong but...', *Financial Times*, April 21, 2006.

Walker, P. (1991) *Staying Power*. London: Bloomsbury.

Warner, Jeremy (2009) 'Britain's energy gap is down to ministers, not markets', *The Daily Telegraph*, 12th October 2009. Accessible at:

<http://www.telegraph.co.uk/finance/comment/jeremy-warner/6310141/Britains-energy-gap-is-down-to-ministers-not-market-failure.html> (Last accessed 16th March 2011).

Watson, Jim (2010) 'UK Gas Security: Threats and Mitigation Strategies', A report commissioned by Greenpeace UK. Brighton: SPRU, University of Sussex.

Watson, Jim; Scott, Alistair (2009) 'New Nuclear Power in the UK: a Strategy for Energy Security?', *Energy Policy* 37, 12, pp. 5092-104.

Watson, Matthew (2009) 'Headlong into the Polanyian Dilemma: The Impact of Middle-Class Moral Panic on the British Government's Response to the Sub-prime Crisis', in *The British Journal of Politics and International Relations* 11, pp. 422-437.

Watson, Matthew (2008) 'Euphoria, Risk and Corporate Scandal: Enron and the Commercial Corruption of Expertise within Financialised Capitalism', *CSGR Working Paper 255/08*, November 2008.

Watson, Matthew (2005) *Foundations of International Political Economy*. Basingstoke and New York: Palgrave Macmillan.

Watson, Matthew (2002) 'Sand in the wheels, or oiling the wheels, of international finance? New Labour's appeal to a new Bretton Woods', *British Journal of Politics and International Relations* 4, 2, pp. 193-221.

Watson, Matthew (1999) 'Globalization and the Development of the British Political Economy' in David Marsh et al eds. *Postwar British Politics in Perspective*. Cambridge: Policy Press.

Webb, Michael G. (1985) 'Energy policy and the privatization of the UK energy industries', *Energy Policy* February 1985, pp. 27-36.

West, J.; Bailey, I.; Winter, M. (2010) 'Renewable energy policy and public perceptions of renewable energy: A cultural theory approach', *Energy Policy* 38, pp. 5739-5748.

Westad, Odd Arne (2000) The New International History of the Cold War: Three (Possible) Paradigms in *Diplomatic History*, 24, 4, pp. 551-565.

Weyman-Jones, Tom (1997) Review of The UK Energy Experience: a model or a warning?', *Energy Policy* 25, 10, pp. 899-900.

Wheeler, Brian (2007) 'Labour and the nuclear lobby', *BBC News* Wednesday, 23 May, 2007. Available at: http://news.bbc.co.uk/1/hi/uk_politics/5149676.stm (Last accessed September 2011)

White, A. (2009) 'Is our power market fit for purpose?' *Energy and Utility Forum, Athenaeum Club*, London. Available at: <http://www.energyandutilityforum.org.uk/downloads/notes-from-ytilitu-031109.pdf>.

Wicks, Malcolm (2009) *Energy Security: A National Challenge in a Changing World*. London: Department of Energy and Climate Change

Widmaier, Wesley (2005) 'The Meaning of an Inflation Crisis: Steel, Enron, and Macroeconomic Policy', *Journal of Post Keynesian Economics*, 27, 4, p. 555.

Widmaier, Wesley; Blyth, Mark; Seabrooke, Leonard (2007) 'Exogenous Shocks or Endogenous Constructions? The Meanings of Wars and Crises', *International Studies Quarterly* 51, pp. 747-759.

Williams, Michael C. (2003) 'Words, Images, Enemies: Securitization and International Politics', *International Studies Quarterly* 47, pp. 511-31.

Williams, Paul (2005) *British Foreign Policy Under New Labour, 1997-2005*. Basingstoke and New York: Palgrave Macmillan.

Wilson, Carter (2000) 'Policy Regimes and Policy Change', *Journal of Public Policy*, 20, 3, pp. 247-274.

Wilson, Isiah III (2008) 'The Arc of Instability and Energy Predation', paper presented at the *International Studies Association (ISA) Conference 2008*, San Francisco.

Wintour, Patrick (2008) 'Wicks: All is lost on global warming without clean coal', *The Guardian*, Friday 8 August 2008. Available at: <http://www.guardian.co.uk/environment/2008/08/08/carboncapturestorage.fossilfuels> (Last accessed September 2011).

Wood, Matthew (2011) 'Shifting Paradigms?: Mapping Policy Change in the Wake of the Financial Crisis', *Paper presented at the ECPR General Conference*, Reykjavik, 24-28 August 2011.

WWF (World Wildlife Fund) (2010) 'E' rating on climate policies shows UK must do better to decarbonise by 2050, *WWF* 23 November 2010. Available at: http://www.wwf.org.uk/what_we_do/press_centre/?4399/E-rating-on-climate-policies-shows-UK-must-do-better-to-decarbonise-by-2050 (Last accessed September 2009).

WWF/Greenpeace (2006) 'Energy Review Update Issue 1', *Greenpeace*. Available at: <http://www.greenpeace.org.uk/media/reports> (Last accessed 22nd November 2010).

Wrigley, E. A. (2010) *Energy and the English Industrial Revolution*. Cambridge: Cambridge University Press.

Wyn Jones, Richard (1995) 'Message in a Bottle? Theory and Praxis in Critical Security Studies', *Contemporary Security Policy* 16, 3.

Yamani, Zaki; Ahmad, Shaikh (1981) 'The Impact of Oil on International Politics', in Mohammad W. Khouja ed. *The Challenge of Energy: Policies in the Making*. Harlow: Longman Group Limited.

Yarrow, George (2010) 'Where next for utility regulation?', *Beesley Lecture, Institute of Directors*, London, 16 September 2010.

Yee, A. S. (1996) 'The Causal Effects of Ideas on Policy', *International Organisation*, 50, 1: 69.

Yergin, Daniel (2007) 'The Fundamentals of Energy Security', a *Testimonial before the U.S. House of Representatives Committee on Foreign Policy*, Washington DC. Available at: <http://foreignaffairs.house.gov/110/yer032207.htm> (Last accessed August 2010).

Yergin, Daniel (2006) 'Ensuring Energy Security', *Foreign Affairs*, 85, 2: 69.

Yergin, Daniel (1998a) 'Foreword', in John Mitchell ed. *Companies in a World of Conflict: NGOs, Sanctions, and Corporate Responsibility*. London: Earthscan.

Yergin, Daniel (1998b) 'Energy Security in the 1990s', *Foreign Affairs*, 67, 1, pp. 110-132.

Yergin, Daniel (1991) *The Prize: the epic quest for oil, money and power*. New York: Free Press.

Yergin, Daniel; Stanislaw, Joseph (1998) *The Commanding Heights: the Battle between Government and the Marketplace that is Remaking the Modern World*. London: Simon and Schuster.

Youngs, Richard (2009) *Energy Security: Europe's New Foreign Policy Challenge*. Abingdon and New York: Routledge.

Zimmerman, William (2002) *The Russian People and Foreign Policy: Russian Elite and Mass Perspectives, 1993-2000*. Princeton: Princeton University Press.

Appendix: List of Interviews, Private Conversations and Conferences

Interviews

- Interview 1: Department for Business, Enterprise and Regulatory Reform (BERR), Energy Strategy and International Unit, January 2008
- Interview 2: BERR, Strategic Analysis Unit, December 2008
- Interview 3: Foreign and Commonwealth Office (FCO), Analyst, January 2008
- Interview 4: FCO, Analyst, August 2010
- Interview 5: Department of Energy and Climate Change (DECC), International Energy team, September 2010
- Interview 6: FCO Moscow, Second Secretary, September 2008
- Interview 7: Former Energy Advisor to President Putin, September 2008
- Interview 8: Wintershall, Moscow, Head of Representation, September 2008
- Interview 9: Deloitte, Moscow, Managing Partner, September 2008
- Interview 10: Standard Chartered, Moscow, Managing Partner, September 2008
- Interview 11: CERA, Founder and Consultant, December 2007
- Interview 12: OXERA, Principal, August 2010
- Interview 13: Member of 2002 PIU Energy Review team, September 2010
- Interview 14: Member of 2002 PIU Energy Review team, February 2011
- Interview 15: Ofgem, January 2011
- Interview 16: DECC, International Energy Security Review team, January 2011
- Interview 17: Qatar National Oil and Gas, Head of International Marketing, December 2009
- Interview 18: Worldwatch, Director, Energy and Climate Program, May 2011
- Interview 19: FCO, former analyst, August 2011
- Interview 20: Former Head of Policy Planning in 10 Downing Street and Senior Policy Adviser

Private Conversations

- Conversation 1: Poyry Consultancy, Principal Consultant, April 2010
- Conversation 2: DECC, Energy Security Review team, April 2010
- Conversation 3: Catherine Mitchell, January 2011;

Conversation 4: DG Economics and Finance of the European Commission, November 2008

Conversation 5: Michael A Sullivan, Senior Advisor, Office of the Coordination for International Energy Affairs of the United States, Department of State, May 2011.

Presentations

Presentation 1: Henrik Lax, Member of European Parliament EU-Russia Committee, November 2008

Presentation 2: Taavi Veskimagi, Estonian ex-Finance Minister, November 2008

Presentation 3: Dr Ioannia Samouilidis, Principal Administrator Director-Generate for Energy and Transport of the European Commission, November 2008

Presentation 4: Lord O'Neil, Chair of the UK Nuclear Industry Commission, Energy Security Conference, Warwick Business School, June 2009

Presentation 5: Neil Pullen, National Grid, UK Gas Operations Manager, Energy Security Conference, Warwick Business School, June 2009

Presentation 6: Professor Nodar Simonia, PEEER Moscow Conference, HSE, September 2009

Presentation 7: Dr Andrew Sentence, Monetary Policy Committee Member, Warwick Business School Lecture to MBA students, October 2009

Presentation 8: Ian Astley, Ministry of Defence, Energy Security in a Multipolar World (ESMW) Conference on Defining Energy Security, London, November 2009

Presentation 9: Claire Macaulay, DECC, ESMW Conference, Said Business School, Oxford, April 2010

Presentation 10: Thea Hutchinson, Senior Economist, Ofgem, ESMW Conference, Said Business School, Oxford, April 2010

Presentation 11: Simon Roberts, UK Industry Taskforce on Peak Oil & Energy Security, ESMW Conference, Saïd Business School, Oxford, April 2010

Presentation 12: Michael Klare, PAWSS, The Five Colleges, ESMW Conference, Scales of Energy Security Conference, University of Birmingham, May 2010

Meetings

Meeting 1: Group meeting to consult on future energy security scenarios, DECC, December 2009