

Contents

<i>List of Tables</i>	<i>page</i> x
<i>Acknowledgements</i>	xii
<i>List of Acronyms and Abbreviations</i>	xiii
<i>List of National Renewable Energy Legislation</i>	xvi
<i>List of Other Legislation and Treaties</i>	xxx
<i>Units of Measurement</i>	xxxii
1 Introduction	1
1.1 The Problem and Significance of the Research	4
1.2 Hypothesis and Research Methodology	7
1.3 Structure of the Book	11
PART I WHAT IS RENEWABLE ENERGY? A CASE OF CONCEPTUAL CONSENSUS	17
2 The Renewable Energy Sources Used for Electricity Generation	19
2.1 Wind Energy	20
2.2 Solar Energy	24
2.3 Biomass	27
2.4 Landfill Gas, Sewage Treatment Gas and Biogas	34
2.5 Hydropower	36
2.6 Geothermal Energy	43
2.7 Ocean and Riverine Energies	47
2.8 Hydrogen/Fuel Cells	53
2.9 Peat	55
2.10 Nuclear Energy	56

viii	<i>Contents</i>	
2.11	Any Other Source Prescribed by the Regulations or Otherwise Permitted	60
2.12	Conclusion	60
	PART II WHY DO COUNTRIES INTERVENE IN THE RENEWABLE ENERGY SECTOR? A CASE OF NORMATIVE DIVERGENCE	63
3	The Economic Justification for Regulating Renewable Energy	65
3.1	The Characteristics of Electricity That Warrant Special Regulatory Treatment	65
3.2	Market Failures Affecting the Renewable Energy Sector	73
3.3	Market Barriers Within the Renewable Energy Sector	79
3.4	Is Regulatory Intervention in the Renewable Energy Sector Warranted from an Economic Perspective?	93
3.5	Conclusion	96
4	Why Do Countries Legislate to Accelerate the Deployment of Renewable Energy?	98
4.1	What Does It Mean to Legislate?	98
4.2	The Identification and Role of Legislative Objectives	100
4.3	The Legislative Objectives in Renewable Energy Law	103
4.4	A Comprehensive Study of the Legislative Objectives in Renewable Energy Laws	107
4.5	Multiple and Competing Legislative Objectives	159
4.6	Conclusion	161
	PART III WHAT ROLE DO REGULATORY SUPPORT MECHANISMS PLAY IN NATIONAL RENEWABLE ENERGY LAWS? A CASE OF SUBSTANTIVE DIVERGENCE	165
5	How Do Countries Regulate to Support Renewable Energy?	167
5.1	The Selection of Regulatory Support Mechanisms	167
5.2	Types of Regulatory Support Mechanisms Used in the Renewable Energy Sector	176
5.3	Evaluating the Success of Regulatory Support Mechanisms	219
5.4	Conclusion	222

6	The Future Development of Regulatory Support Mechanisms – Unification, Harmonisation, Convergence, Divergence or Regulatory Competition?	224
6.1	What Are the Advantages and Disadvantages of National Renewable Energy Laws Becoming More Similar Internationally?	225
6.2	The Future Development of Regulatory Support Mechanisms: Same, Same or Different?	229
6.3	Unification	230
6.4	Harmonisation	231
6.5	Convergence	237
6.6	Divergence	240
6.7	Regulatory Competition	241
6.8	Conclusion	248
7	Conclusion	250
7.1	What Is Renewable Energy? A Case of Conceptual Consensus	253
7.2	Why Intervene in the Renewable Energy Sector? A Case of Normative Divergence	255
7.3	What Role Do Regulatory Support Mechanisms Play in National Renewable Energy Laws? A Case of Substantive Divergence	260
7.4	Conclusion	264
	<i>Index</i>	265