

Contents

Foreword	vii
Preface	ix
Acknowledgments	xii
List of Acronyms	xiii
Chapter 1. Three Types of Space for Analyzing Energy Transition	1
1.1. From energy-to-energy transition	1
1.2. Presentation of the six research areas	8
1.3. The importance of climates in the energy transition	12
1.4. Energy sectors analyzed by field	14
Chapter 2. Energy Transition in Metropolises	17
2.1. Energy characteristics in metropolises	17
2.2. The example of Riyadh in Saudi Arabia	22
2.2.1. Presentation of Riyadh	22
2.2.2. Development, construction and housing of Riyadh	32
2.2.3. Transport from Riyadh	47
2.2.4. Riyadh's challenges for energy transition	51
2.3. The example of the European Metropolis of Lille in France	63
2.3.1. Presentation of the European Metropolis of Lille	63
2.3.2. Development, construction and housing of the European Metropolis of Lille	71
2.3.3. Transport of the European Metropolis of Lille	77
2.3.4. Challenges of the European Metropolis of Lille for the energy transition	81

2.4. Lessons learned from the energy transition in metropolises	92
2.4.1. Priority to controlling energy consumption in metropolises	95
2.4.2. Microproduction of energy in metropolises	102
2.4.3. Peripheral power generation units and networks	104
Chapter 3. The Energy Transition in Rural Areas	109
3.1. The characteristics of energy in rural areas	109
3.2. The example of Pays de Fayence in France	112
3.2.1. Presentation of Pays de Fayence	112
3.2.2. Development of the Pays de Fayence	117
3.2.3. Transport in the Pays de Fayence	130
3.2.4. Challenges of the Pays de Fayence for the energy transition	132
3.3. The example of Bokhol in Senegal	137
3.3.1. Presentation of Bokhol	137
3.3.2. Development of the Bokhol site	149
3.3.3. Bokhol's challenges for the energy transition	156
3.4. Lessons learned from the energy transition in rural areas	158
3.4.1. Dynamics of positive energy territories	160
3.4.2. Complex regulations and rurality	165
3.4.3. Landscapes and rurality	168
Chapter 4. The Energy Transition in the Desert	171
4.1. The characteristics of energy in the desert	171
4.2. The example of Ouarzazate in Morocco	172
4.2.1. Presentation of Ouarzazate	172
4.2.2. Spatial planning in Ouarzazate	183
4.2.3. Ouarzazate's challenges for the energy transition	186
4.3. The example of Neom in Saudi Arabia	188
4.3.1. Neom's presentation	188
4.3.2. Development of the Neom project	195
4.3.3. Neom's challenges for the energy transition	199
4.4. Lessons learned from the energy transition in the desert	200
Conclusion	205
References	219
Index	223