

Contents

| | | |
|----------|--|------------|
| 1 | General Survey of the World Expo | 1 |
| 2 | Application and Analysis of Low-Carbon Technologies in Expo 2010 Shanghai | 5 |
| 2.1 | Renewable Energy and New Energy | 6 |
| 2.1.1 | Solar Energy | 6 |
| 2.1.2 | Wind Energy | 20 |
| 2.1.3 | Biomass Energy | 37 |
| 2.1.4 | Fuel Cells | 41 |
| 2.1.5 | Geothermal Energy | 47 |
| 2.2 | Energy Efficient Technologies | 56 |
| 2.2.1 | Building Energy Efficiency | 56 |
| 2.2.2 | Ice Storage Technology | 73 |
| 2.2.3 | Other Energy Saving Technologies | 77 |
| 2.3 | Low-Carbon Transportation | 92 |
| 2.3.1 | Low-Carbon in Transportation | 92 |
| 2.3.2 | New Energy Vehicles | 93 |
| 2.4 | Technologies in Water Treatment | 106 |
| 2.4.1 | Water Purification | 106 |
| 2.4.2 | Rainwater Treatment | 111 |
| 2.4.3 | Waste Water Treatment | 114 |
| 2.4.4 | Summary of Water Treatment Technologies Applied in the Shanghai Expo | 115 |
| 2.5 | Solid Wastes Disposal | 116 |
| 2.5.1 | Introduction to Solid Waste Disposal | 116 |
| 2.5.2 | Applications of Solid Waste Disposal Technologies in the Shanghai Expo | 118 |
| 3 | Typical Low-Carbon Pavilions in the Expo | 123 |
| 3.1 | One Axis and Four Pavilions | 123 |
| 3.2 | Japan Pavilion | 128 |

| | | |
|--|---|------------|
| 3.3 | Switzerland Pavilion | 130 |
| 3.4 | Italy Pavilion | 131 |
| 3.5 | Finland Pavilion | 132 |
| 3.6 | Canada Pavilion | 132 |
| 3.7 | Hamburg Case Pavilion | 133 |
| 3.8 | London Zero-Carbon Pavilion | 134 |
| 3.9 | Ecological House in Shanghai Case Pavilion | 137 |
| 3.10 | Alsace Case Pavilion | 140 |
| 3.11 | Broad Pavilion | 141 |
| 3.12 | Madrid Pavilion | 142 |
| 3.13 | Shanghai Corporate Joint Pavilion | 145 |
| 4 | The Concept of Low-Carbon Life in the Expo | 147 |
| 4.1 | Low-Carbon Garments | 147 |
| 4.2 | Milk Carton Benches | 148 |
| 4.3 | Creative Furniture | 149 |
| 4.4 | Environmental-Friendly Paper | 151 |
| 4.5 | Direct Drinking Water | 151 |
| 4.6 | Green Bicycles | 152 |
| 5 | Conclusions and Recommendations | 155 |
| Appendix A: Companies and Organizations in Application of New and Renewable Energy Technologies in the Expo | | 159 |
| Appendix B: Companies and Organizations in Application of Building Energy Efficiency Technologies in the Expo | | 189 |
| Appendix C: Companies and Organizations in Application of Other Energy-Saving Technologies in the Expo | | 213 |
| Appendix D: Companies and Organizations in Application of Water Treatment Technologies in the Expo | | 227 |
| Appendix E: Companies and Organizations in Application of New Energy Vehicles in the Expo | | 237 |

The Research Report on Application of Low-carbon
Technology in Expo 2010 Shanghai

; (Eds.)

2014, XV, 247 p. 179 illus., 53 illus. in color., Hardcover

ISBN: 978-3-662-44356-9