

Short Contents

Acknowledgements	i
Abstract	iii
Zusammenfassung	v
Short Contents	vii
Detailed Contents	ix
List of Figures	xiii
List of Tables	xv
Nomenclature	xvii
1 Introduction	1
2 Problem Formulation for Urban Energy System Design Methodology	19
3 From Data to Heat Demand of Urban Areas	31
4 Reduction of the Input Data Set	45
5 Integration of renewable Energy into Urban Energy Systems with thermal Storage	69
6 Buildings as thermal Energy Storage	101
7 Retrofitting as Decision Variable	113
8 Integrating Uncertainty into System Design	121
9 Conclusion	143
Bibliography	167
Curriculum Vitae	169