statistics of an and the solution of the solution of the solution.

nouncingent sources than yranismer.

Adaptived Strangegin Cherhard Thusseling and Bing Shar

Afternering and intentol description

Contents

Foreword Preface

1 Sustainable development and climate change Sustainable development Scenarios

	Sustainable-development scenarios	5
	Audience and objectives	6
	Structure of this book	7
2	Methodology	9
	Why scenario analysis?	9
	Building long-term E3 scenarios	10
3	Energy-economy-environment scenarios at IIASA-ECS	20
	A comprehensive collection of energy-economy-environment	
	scenarios	20
	Exploring the ranges	21
	IIASA's long-term E3 scenarios	24
	Results of all three scenario sets	35
	Analysis of mitigation scenarios	51
	Analysis of sustainable-development scenarios	54

4 Technology clusters

82

1X

2

4

Defining technology clusters	82
Technology kinship	85
Further examples of technology clusters	87
Identifying market success (MS) clusters	97
A comprehensive example of clusters and their relationships	106
A sustainable-development scenario in detail	109
Numerical assumptions for the two scenarios	110
Model results	126
Estimation of R&D expenditures plus policy implications	156

vii

viii	Achieving a sustainable global energy system	
6 Summa	ary and policy implications	160
Appendix Manfred S	MESSAGE: a technical model description trubegger, Gerhard Totschnig and Bing Zhu	168
Intro	duction	168
Math	nematical model description	179
MES	SAGE-MACRO	209
The	scenario generator (SG)	210
A bri	ief summary of MESSAGE's applications	211



contrado electrico bos tribuno electronica 215

Accession

Autience and objective

Structure of this back

Massion

Massin

Massion</t

