Energy., Environment and Development

Jose Goldemberg and Oswaldo Lucon



Contents

List	of	Figures,	Tables	and	Boxes	vii
Forewo	ord	to the	e Se	econd	Edition	xxi
Forewo	ord by Ac	him Steiner				xxiii
List	of	Acronyms	and	Abbrevia	tions •	xxv
1 Con	nections					1
Co Th Po	rces ncept of e expans wer	energy ion of gases and f thermodynami		tion of steam	m engines	3
Th En	e energy ergy con	Iuman Activities cost of satisfyir sumption as a f sumption in rur	ng basic hu function of	income .	ban household	35 Is
Cla En En	ergy bala ergy reso	on of the source	ves			45
5 Energy and Development Gross Domestic Product (GDP) and National Accounting Economic growth Disparities in income distribution Quality of life and the Kuznets curve Human Development Index (HDI) The relationship for-energy-development Energy intensity: energy and economic product						65
En Qu	alificatio	Facts ntal impacts due n of environme n pollution		_		101

vi Energy, Environment and Development

Regional pollution Global aspects: the greenhouse effect Occupational pollution	
7 Energy and the Environment: The Causes Indicators Contribution by sources	181
8 Technical Solutions Energy efficiency Technological advances in power production Renewable energies Transportation Industry and other stationary pollution sources Electricity consumption in residential, commercial and public sectors Combatting deforestation	243
9 Policies to Reduce Environmental Degradation Geographical scale of impacts Environmental law and energy Environmental support capacity: management by quality Environmental protection costs The cost of climate change Energy policies Integrated resource planning Barriers for emission reduction and overcoming policies Control of deforestation	337
10 World Energy Trends Projections Conclusions from the outlooks Technological change Energy intensity trends	381
11 Energy and Lifestyles Lifestyle and consumption patterns Consumer profiles	403
12 Energy and the Science Academies	413
Annex 1 Energy, Environment and Development Timeline Annex 2 Conversion Units Index	417 429 441