

Foreword

Just when Earth needed genius

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The world is changing, it has always been changing, and experience tells us that the companies that will be on the scene tomorrow are those that are adapting, not those that are resisting change. This book is about the companies that celebrate change and welcome challenge, and the geniuses in those companies who are finding their way around the laws of physics, confidently, stubbornly, and relentlessly, in pursuit of both profit and environmental protection.

For the past 15 years my workplace has been the United Nations Environment Program (UNEP), where I directed the Division of Technology, Industry, and Economics (DTIE). Our mission is to encourage decision-makers in government and industry to develop and adopt policies, practices, and technologies that are cleaner and safer, and which make efficient use of natural resources. From this perspective, it is easy to see that, if current trends in consumption of natural resources continue, we would need three or four planets by the end of the century. It is also easy to see that the best way to address these pressing problems is to mobilize the corporate sector, where both companies and society can benefit.

Fossil fuel resources are being depleted, pollution is still imperiling human health and ecosystems, and greenhouse gases are affecting the climate. Sustainable development is the strategy of moving to a global society based on abundant renewable energy, cleaner production, ecosystem approaches to commerce that emphasize the recovery and recycling of materials, and prosperity that does not put our natural capital at risk. National and global populations demand changes toward sustainability, and they are growing impatient.

Fortunately, government and industry have come a long way in the last few decades and can act quickly to build on successes already achieved by working together. Governments have been removing perverse subsidies and insisting that polluters pay the external costs of environmental despoilment. Leading private-sector companies have gradually shifted from expensive and reactive end-of-pipe compliance to a cost-effective approach of pollution prevention, cleaner production, and eco-efficiency. It is no coincidence that most of the companies featured in this book are at the forefront of environmental leadership. Such leadership enthusiastically supports the geniuses whose ideas will lead to profits from new green products.

Concern over global climate change has led to a number of international political responses, most notably the United Nations Framework Convention on Climate Change and its Kyoto Protocol. When it enters into force in early 2003, developed countries “party to the Kyoto Protocol” will be required to reduce their emissions of carbon dioxide (CO₂) to agreed targets. Governments will achieve compliance

with the Kyoto Protocol by changing the operating rules of business by applying a mixture of command-and-control regulations, energy taxes and price incentives, market transformations, and voluntary programs. In addition to providing incentives for the development of renewable energy supplies and energy-efficient products, the Protocol creates new business opportunities through its provisions for emissions trading, the clean development mechanism, and joint implementation.

Let me provide some striking signs of change and examples of success in protecting the climate. Vehicle manufacturers in Europe have agreed to improve average fuel efficiency by 25% by 2008, setting a cap of just 140 grams of CO₂ emitted per kilometer traveled (8 oz per mile). Some manufacturers are now marketing tires that can reduce energy consumption, and, if these tires are used everywhere in the world, then CO₂ emissions will be reduced by about 60 million tons per year! Denmark, Germany, The Netherlands, and the United Kingdom (UK) are implementing “greenpower” policies that will drastically increase the share of renewable energy in the overall energy mix; and France is now following the same path. Pioneering regulations by Austria, Denmark, and Switzerland are encouraging the European Commission to consider stringent regulations, or even bans, on potent hydrofluorocarbon (HFC) greenhouse gases. Emerging economies also understand the need to move toward more sustainable production and consumption patterns. For example, by improving technologies and reducing wasteful practices, China is managing to significantly “decouple” economic growth from energy consumption.

The environmental and social responses to climate change will bring change to the energy industry and its customers in the 21st century. By continuing to spur technological innovation, these responses will have an increasing impact on the way that energy is generated, used, and even conceived. For forward-looking companies in all parts of the world there is an unparalleled opportunity to develop creative approaches to generating and using energy, and the winners will be those who create value without environmental costs.

This book presents a number of inspiring examples of technologies and products designed for sustainable development; and there are many others that deserve to be reported as well. We need many more innovations to move us away from current, unsustainable trends.

You, the reader of this book, can make a difference. I urge you to suspend your doubts, to open your mind, and allow yourself to dream of a better world. Unleash the genius in yourself and your colleagues. Change your own home and lifestyle and rededicate your workplace to working for the good of both present and future generations.



Jacqueline Aloisi de Larderel was Executive Director of the Division of Technology, Industry, and Economics of the United Nations Environment Programme (UNEP) from 1987 to 2003. Her Center brings together industry, government, and non-governmental organizations to work towards environmentally sound industrial development using environmental management tools and the Cleaner Production concept. Before joining UNEP, she was employed by the French Ministry of the Environment. Ms. Aloisi de Larderel holds a Master of Science degree in Chemistry and Pharmacology from the University of Paris and Master of Business Administration from the European Institute of Business Administration.