

Preface

This book on *Energy Systems and Management* reports selected papers of the International Conference on Energy and Management held during 5–7 June 2014 at Istanbul Bilgi University, Turkey. It was organized by Istanbul Bilgi University Department of Energy Systems Engineering and PALMET Energy to share knowledge on the recent trends, scientific developments, innovations and management methods in energy. Academicians, scientists, researchers and industry specialists studying in the energy field from nine countries contributed through oral and poster presentations.

The book starts with the chapter “An Overview of Energy Technologies for a Sustainable Future”, which examines the correlation between population, economy and energy consumption in the past, and reviews the conventional and renewable energy sources as well as the management of them to sustain the ever-growing energy demand in the future. The rest of the chapters are divided into three parts; the first part of the book, “Energy Sources, Technologies and Environment”, consists of 12 chapters, which include research on new energy technologies and evaluation of their environmental effects. The second part “Advanced Energy Materials” includes seven chapters devoted to research on material science for new energy technologies. The third part “Energy Management, Economics and Policy” contains ten chapters on planning, controlling and monitoring energy-related processes together with the policies to satisfy the needs of increasing population and growing economy.

This book is designed to provide the reader with an understanding of the current status and the future of energy sources and technologies, as well as their interaction with the environment and the global energy policies. I hope you will find this book useful in energy studies.

I would like to mention that this conference was made possible to celebrate the 100th anniversary of the first Istanbul Electric Power station, the 30th anniversary of PALMET Energy and the first graduates of Energy System Engineering students. I would also like to thank the organizing committee and the scientific committee members for their valuable contributions to the conference. Finally, I express my sincere thanks to Mr. Doğanay Samuray, CEO of PALMET Energy, and his team for their cooperation and full support.

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