



Advances in Transdisciplinary Engineering series

volume 45



New Energy and Future Energy Systems



Proceedings of the 8th International Conference (NEFES 2023), Matsue, Japan, 21-24 November 2023



IOS Press

## New Energy and Future Energy Systems

A reliable and sustainable energy supply is a prerequisite for any stable and prosperous society, and the volatility of international supply chains, coupled with the increasing threat of a global climate crisis, mean that developing and maintaining efficient and dependable energy systems for the future is more important than ever.

This book presents selected papers from NEFES 2023, the 8th International Conference on New Energy and Future Energy Systems, held from 21 to 24 November 2023 in Matsue, Japan. The conference encompasses a number of different areas, including power system operation, biomass energy, fuel energy, solar energy, thermal energy, energy materials, energy technology, and other related fields. From a total of 84 submissions received, 12 peerreviewed papers were selected for publication in this book. Ranging widely, from renewable energy policy planning for a low-carbon economy and the impact of lightning-induced wildfires on power systems to the energy supply capacity of micro energy grids and safety design technologies for a sodiumcooled fast reactor, the papers included here offer a fascinating insight into the challenges and solutions encountered in modern energy systems.

Covering a wide range of topics related to energy and energy systems, the book will be of interest to all researchers, engineers, and educators working in the field.

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### NEW ENERGY AND FUTURE ENERGY SYSTEMS

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Transdisciplinary engineering is the exchange of knowledge about product, process, organization, or social environment in the context of innovation. The ATDE book series aims to explore the evolution of engineering, and promote transdisciplinary practices, in which the exchange of different types of knowledge from a diverse range of disciplines is fundamental. The series focuses on international collaboration and providing high-level contributions to the internationally available literature on the theme of the conference.

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# New Energy and Future Energy Systems

Proceedings of the 8th International Conference (NEFES 2023), Matsue, Japan, 21–24 November 2023

### Edited by

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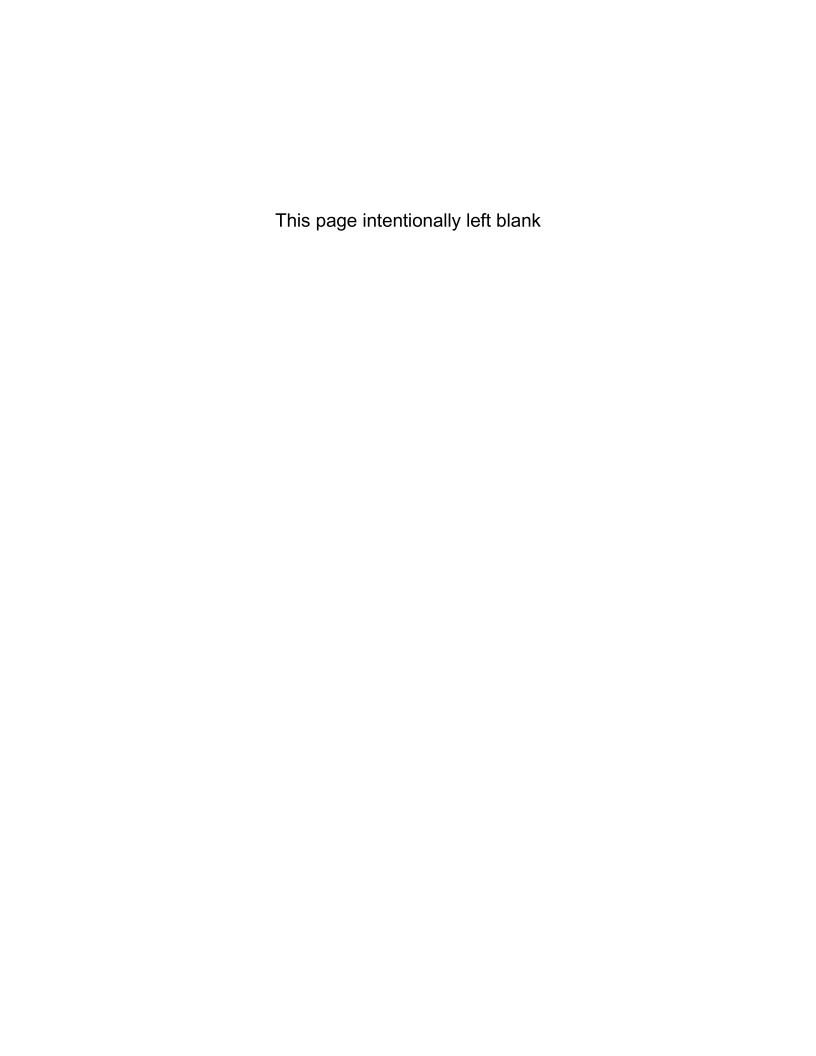
## Preface

This book contains selected papers from the 8th International Conference on New Energy and Future Energy Systems (NEFES 2023), which was held from November 21 to 24, 2023 in Matsue, Japan. About 60 participants from 20 countries (including China, Japan, USA, UK, Canada, Australia, India, Pakistan, Egypt, Saudia Aribia, Mozambique, Algeria, Sweden, Philippines, Ghana) attended the conference. The conference program included 3 keynote presentations, 26 oral presentations, and 10 poster presentations.

Twelve peer-reviewed papers were selected from 84 submissions for this book. The topics covered are power system operation, biomass energy, fuel energy, solar energy, thermal energy, energy materials, energy technology, and other related fields. It will be of interest to researchers, engineers, and educators working in the field.

The Organizing Committee would like to extend their gratitude to all the keynote speakers and participants, international reviewers and members of the technical program committee for their dedicated contribution and commitment to the conference.

The Conference Chairs of NEFES 2023



### About the Conference

#### **Peer Review Statement**

Submitted papers: 84

Accepted peer reviewed papers: 12

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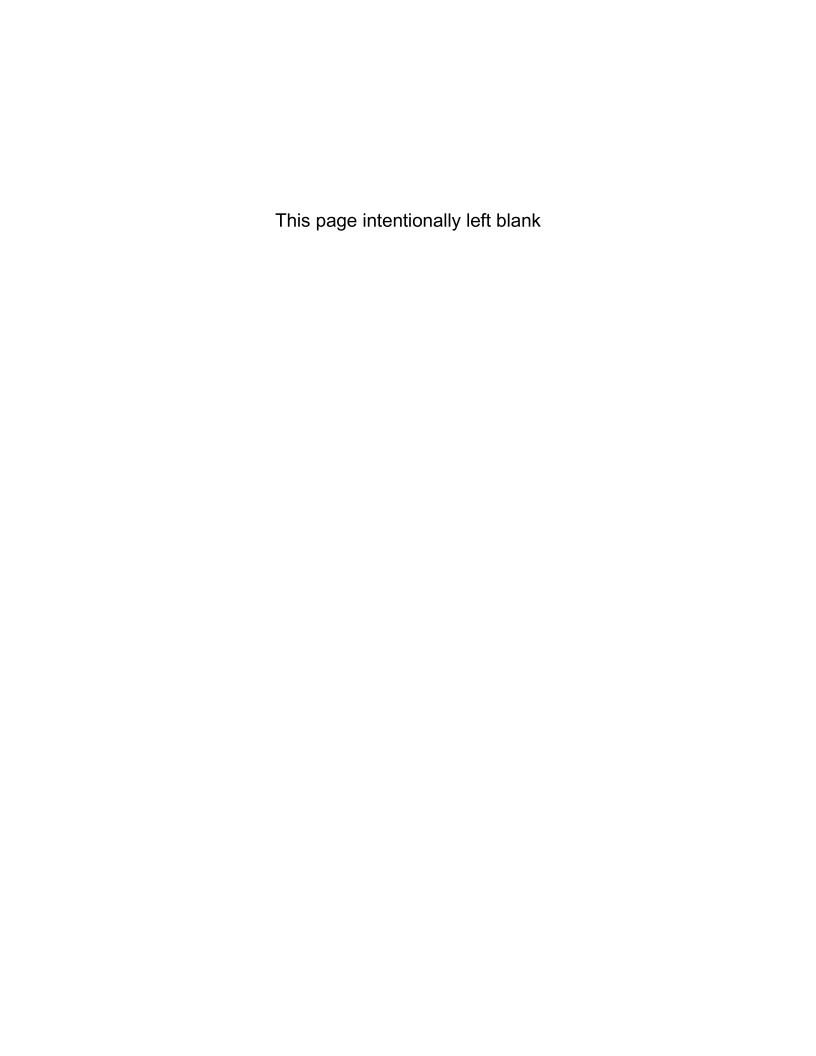
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G.L. Kyriakopoulos (Ed.)

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