
Editorial

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Biographical notes: Kun Liao is Assistant Professor of Supply Chain Management at Central Washington University, USA. He received his PhD Degree in Manufacturing Management and MS in Industrial Engineering from the University of Toledo, USA. He holds a BE in Mechanical Engineering from Tsinghua University, China. He has published in several academic journals such as *International Journal of Production Economics*, *Information Systems Management*, *Journal of Manufacturing Technology Management*, and *Management Accounting Quarterly*. He is Associate Editor of *Operations and Supply Chain Management: an International Journal*. His research interests are innovation management, manufacturing strategy, and global supply chain management.

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The Sun provides the Earth with as much energy every hour as human civilisation uses every year. If the tiniest fraction of that sunlight were to be captured and used in the place of fossil fuels, there would be no need to emit greenhouse gases from power plants.

There are many solar or renewable technology research and facilities all over the world. This special issue focuses on new technology commercialisation, business

management, and governmental policies. The goal is to prepare a reference issue of managing and promoting solar and renewable technologies.

In this issue on solar and renewable energy, researchers from different countries present broad and interesting topics such as their solutions to solar technology, applications of solar system, financial and management issues for solar system, and suggested policies for developing and developed nations.

Researchers for this issue pay a lot of attentions to solar energy policies. In 'Dynamic growth in a photovoltaic market', based on the study of a local photovoltaic (PV), a model of a new industry focusing on the dynamic feature with feedback and coordination is proposed. In 'The constraints in managing a transition towards clean energy technologies in developing nations: reflections on energy governance and alternative policy options', an adoption framework is suggested for developing nations including strategic and tactic issues. In 'Solar eclipse: the rise and 'dusk' of the Dutch PV innovation system', authors apply the theory of innovation system dynamic in the PV system. After identifying seven key processes, they find that processes related to guidance of the search and market information fluctuate greatly while those related to knowledge and entrepreneurial activities are quite stable in the Netherlands.

Another group research on solar energy is on technology issues. In 'Methods for intensifying parabolic trough receivers operation', the author reports the increased absorption efficiency of solar energy by using a new method. In 'Forecasting a change in technology: are Dye-sensitised solar cells a source of ubiquitous energy?' authors view Dye-sensitised solar cells as a source of ubiquitous energy by doing review of recent and historical developments. In 'Renewable energy and smart grid principles integration into campus-wide energy strategy at the University of New Mexico', authors introduce a hierarchical energy management strategy applied in a campus-wide energy management system by integrating renewable energy and traditional energy.

The third group of research is on market research, supply chain management, and combines portfolio of solar energy. In 'Management of the photovoltaic supply chain', unique factors of PV Supply Chain (SC) are first introduced including government policy and dependent on subsidies, extensively sensitive to inventory fluctuations, raw material shortages, and geo-political tensions. By contrasting with Fisher's (1997) and Lee's (2004) traditional SC typologies, the author proposes a framework for the specialised PV SC management including the raw materials components, manufacturing processes, demand trends, and post-life issues. 'Solar and wind energy portfolios and real-time pricing', is a valuable research done by both technology and finance researchers. It integrates solar and wind energy by using a portfolio method to provide stable power output. Hourly data from a local energy system is used to validate the method. The research, 'Technology transfer: solar power and distributed rural electrification', focuses on assessing the feasibility of transferring a PV technology from a national lab to a startup. The technology is suitable for rural communities which are expected to have a large supply gap for energy by 2030.

In addition, valuable findings on biofuels and wind energy are also included in this special issue. In 'The role of microalgae in the deployment of biofuels: contrasting algae and solar technologies', authors suggest policies to foster microalgae biofuel by comparing it with solar energy. A portfolio research on wind and solar energy is included in the "solar and wind energy portfolios and real-time pricing".