

Smart Grid and Renewable Energy



ISSN: 2151-481X



Journal Editorial Board

ISSN Print: 2151-481X ISSN Online: 2151-4844

<http://www.scirp.org/journal/sgre>

Editors-in-Chief

Prof. Yuanzhang Sun Wuhan University, China

Editorial Advisory Board

Prof. Ching Chuen Chan University of Hong Kong, China
Prof. Yusheng Xue State Grid Electric Power Research Institute, China
Prof. Ryuichi Yokoyama Tokyo Metropolitan University, Japan
Dr. Xiaoxin Zhou Chinese Society of Electrical Engineering, China

Editorial Board

Prof. Gholam Hossein Bordbar Shiraz University, Iran
Prof. Emanuele Calabrò Institute of Industrial Technology, Italy
Prof. Ho Chang National Taipei University of Technology, Chinese Taipei
Dr. Seokheun Choi Binghamton University, USA
Prof. Kalyanmoy Deb Indian Institute of Technology, India
Prof. Volkmar Dierolf Lehigh University, USA
Dr. Daniel Garraín Spanish Ministry of Science and Innovation, Spain
Dr. Katerina Ioakeimidi Stanford University, USA
Dr. Herbert Iu University of Western Australia, Australia
Dr. Maatouk Khoukhi United Arab Emirates University, UAE
Dr. Sanchit Khurana Bloom Energy, USA
Prof. Chunxiang Li Shanghai University, China
Dr. Dylan Dah-Chuan Lu University of Sydney, Australia
Prof. D. Subbaram Naidu University of Minnesota, USA
Dr. Federico Scarpa University of Genoa, Italy
Dr. Yang Shi University of Victoria, Australia
Dr. Pierluigi Siano University of Salerno, Italy
Prof. Igor I. Strakovsky The George Washington University, USA
Dr. Salahadin Vaisi University of Kurdistan, Iran
Prof. Huiming Wee Chung Yuan Christian University, Chinese Taipei
Prof. Daniele De Wrachien State University of Milan, Italy
Dr. Fuqian Yang University of Kentucky, USA
Prof. Changhui Ye Chinese Academy of Sciences, China
Prof. Weiping Zhang Shanghai Jiao Tong University, China

Table of Contents

Volume 9 Number 10

October 2018

PV-Hybrid Off-Grid and Mini-Grid Systems for Rural Electrification in Sub-Saharan Africa

J. C. I. Rabetanetiarimanana, M. H. Radanielina, H. T. Rakotondramiarana.....171

A Study on Unified Testing Method for IEC 61850 Based Server with Focus on Setting Group Function

N. Kim, A. Abubakari, B. Jang.....186

Economic Analysis and Environmental Impacts of a Hybrid PV System in Arid Climate Considering Different Types of Solar Trackers

Y. Z. Alharthi, M. K. Siddiki, G. M. Chaudhry.....199

Development of a Model Driven ACSI Conformance Testing for IEC 61850-Based IED

B. Jang, A. Abubakari, N. Kim.....215

Smart Grid and Renewable Energy (SGRE)

Journal Information

SUBSCRIPTIONS

The *Smart Grid and Renewable Energy* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per copy.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2018 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

Copyright for individual papers of the journal:

Copyright © 2018 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability

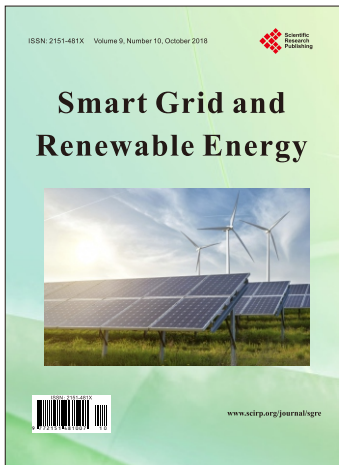
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: sgre@scirp.org

Call for Papers



Smart Grid and Renewable Energy

ISSN Print: 2151-481X ISSN Online: 2151-4844

<http://www.scirp.org/journal/sgre>

Smart Grid and Renewable Energy (SGRE) is an international journal dedicated to the latest advancement of smart grid and renewable energy. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of smart grid and renewable energy.

Editors-in-Chief

Prof. Yuanzhang Sun

Wuhan University, China

Editorial Advisory Board

Prof. Ching Chuen Chan

University of Hong Kong, China

Prof. Yusheng Xue

State Grid Electric Power Research Institute, China

Prof. Ryuichi Yokoyama

Tokyo Metropolitan University, Japan

Dr. Xiaoxin Zhou

Chinese Society of Electrical Engineering, China

Subject Coverage

All manuscripts submitted to SGRE must be previously unpublished and may not be considered for publication elsewhere at any time during SGRE's review period. Additionally, accepted ones will immediately appear online followed by printed hard copy. The topics to be covered by Smart Grid and Renewable Energy include, but are not limited to:

- Bio-Energy Technologies, Process and Utilization
- Concept and Structure of Smart Grid
- Decision Making under Uncertainty in the Integration of Renewable Energy Systems
- Design of Sustainable Product-Service Business Models
- Development of Smart Grid
- Environmental-Friendly Technologies for Power Generation
- Geothermal and Tidal Wave Energy
- Hydropower Technologies and Applications
- Information and Smart Meter Reading
- Integrated Energy and Communications
- MEMS & NEMS and Their Applications for Power Generation
- New Technologies and Design for Energy Efficiency
- New Technologies for Minimizing CO₂ Generation
- Operations Research for Green Logistics
- Photovoltaic for Solar Power Applications
- Power System Analysis and Optimization
- Power System Planning and Operation
- Service Optimization for Renewable Energy Supply
- Solar Energy Utilization—Heat and Mass Transfer Technology
- Wind Power Generation and Utilization

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the SGRE.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

<http://www.scirp.org/journal/sgre>

E-mail: sgre@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific
Research
Publishing**

Website: <http://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org