



CALL FOR PAPERS

Journal of Modern Power Systems and Clean Energy

Special Section on Coordinated Planning, Operation and Control of Electricity and Natural Gas Infrastructures

The development of sustainable, affordable, and clean sources of energy is considered a prerequisite for today's economic strength and will benefit tomorrow's society. Under the impetus of competition in the energy industry, the unbundling of the electricity sector has introduced new technologies for the generation and the delivery of electricity, which signify less pollutant, highly efficient, and less costly ways of supplying the electricity. The large-scale integration of variable renewable units in power systems would require a fast response generating capacity, and natural gas-fired generation units will continue to play an indispensable role in power system operation and control. It is envisioned that cheap supply of natural gas, abundant quantity of renewable energy, and greater use of smart grid for promoting customer participations in managing the daily electricity load will reshape the global energy profile for supplying electricity in upcoming years. However, there are many challenges that require further research and development on the planning, operation and control of integrated electricity and natural gas infrastructures. New tools are desired for managing the coupling between electric power system and natural gas, as well as innovative methods for analyzing the impact of uncertainty on the integrated energy systems.

This special section aims at addressing the challenges in coordinated planning, operation and control of natural gas and electric power systems to enhance the resilience, economics, efficiency, reliability and security of both infrastructures. We invite original submissions focusing on the computational and technological aspects of the integrated electric power and natural gas systems.

The topics of interests include, but are not limited to:

- Coordinated planning, operation, and control of integrated electricity and natural gas systems
- Impact of the coordinated planning and operation on resilience, economics, efficiency, and reliability of electricity and natural gas systems
- Coordinated market operations of integrated electricity and natural gas systems
- Integration of variable renewable energy with the coordinated electricity and natural gas systems
- Impact of cyber and physical security on the coordinated operation of the two infrastructures
- Impact of uncertainty on the coordinated planning, operation, and control of the two infrastructures
- Big data management and communication in the coordinated electricity and natural gas systems
- Distributed energy management systems in energy hubs

Submission Guidelines

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Important Dates

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Contact Information

Dr. Yan ZHANG

Ms. Ying ZHENG

Tel: 86 25 8109 3045, 86 25 8109 3060; Fax: 86 25 8109 3040

Email: mpce@alljournals.cn; zhengying1@sgepri.sgcc.com.cn

About Journal of Modern Power Systems and Clean Energy (MPCE)

MPCE sponsored by State Grid Electric Power Research Institute (SGEPRI) is open accessed, peer-reviewed and quarterly published journal in English. It is indexed in Science Citation Index Expanded (SCI-E) and Scopus. It is the first international power engineering journal originated in mainland China. MPCE publishes original papers, short letters and review articles in the field of modern power systems with focus on smart grid technology and renewable energy integration, etc. MPCE is dedicated to presenting top-level academic achievements in the fields of modern power systems and clean energy by international researchers and engineers, and endeavors to serve as a bridge between Chinese and global researchers in the power industry. It is published by SGEPRI Press and Springer-Verlag GmbH Berlin Heidelberg commencing from June, 2013.