

Call for Papers
Journal of Energy Engineering

Special Issue on
Challenges and opportunities in the 21st century energy infrastructure

As the 21st century continues to unfold, the worldwide energy infrastructures face unprecedented challenges. Global energy consumption is projected to grow by more than a third over the next 25 years, largely driven by fast growing world population. Fossil fuel reserves are being depleted much faster than new ones are being made, which will in turn raise long-term average and short-term volatility of fuel prices. Unforeseeable attacks and contingencies caused by human or natural disasters pose constant threats to the security of power systems. As the largest man-made carbon dioxide emitter, the energy industry is undergoing a series of reforms, aiming to reduce the carbon footprint and the impact on climate change. Part of this effort involves embracing renewable energy and efficiency to a much greater extent, which will require significant changes to the industry's traditional business model.

Along with grand challenges, come grand opportunities. Countries throughout the world are providing various forms of incentives to stimulate R&D and investment in renewable energy. Renewable energy can be particularly suitable for serving the rapidly growing energy needs in developing countries, most of which have abundant renewable energy resources as well as the ability to manufacture the labor-intensive infrastructures to harness these. Ever evolving technologies, exemplified by plug-in hybrid electric vehicles and smart-grid technologies have created new interdependencies between the energy infrastructure and others, such as transportation and communication networks.

The *Journal of Energy Engineering* will publish a theme issue devoted to “challenges and opportunities in the 21st century energy infrastructure”. This special issue invites conversations and debates on a broad range of topics including, but not limited to:

- Long-term investment planning for energy infrastructures
- Measuring and improving the sustainability and resiliency of energy infrastructures
- Interdependencies between energy and other infrastructures
- Integrating renewable energy to the power grid
- Integrating plug-in hybrid electric vehicles and smart grid technologies to the power grid
- Novel demand response and efficiency approaches
- Impact of climate changes on energy systems
- Assessment of environmental policies
- Lessons from international experiences with energy infrastructures

Papers on related topics are also welcome. All papers will be subject to peer review and must be submitted online. Manuscript requirements and submission instructions can be found on the following website <https://www.editorialmanager.com/jrneyeng>. Upon submission, please indicate in the cover letter that the submission is intended for this special issue. The deadline of submission is **April 30, 2011**. This issue is expected to be published in 2012.

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