



Call for Papers:

Special Issue of Energy Efficiency

“Demand-side policies, governance and socio-technical mitigation pathways of limiting global warming to 1.5°C”

Full Submission Deadline: 1st November 2017

The journal Energy Efficiency covers wide-ranging aspects of energy efficiency in the residential, tertiary, industrial and transport sectors. Coverage includes a number of different topics and disciplines including energy efficiency policies at local, regional, national and international levels; long term impact of energy efficiency; technologies to improve energy efficiency; consumer behavior and the dynamics of consumption; socio-economic impacts of energy efficiency measures; energy efficiency as a virtual utility; transportation issues; building issues; energy management systems and energy services; energy planning and risk assessment; energy efficiency in developing countries and economies in transition; non-energy benefits of energy efficiency and opportunities for policy integration; energy education and training, and emerging technologies. **The journal is pleased to announce a call for papers for a special issue on the topic of Demand-side policies, governance and socio-technical mitigation pathways of limiting global warming to 1.5°C to be guest-edited by Prof. Luis Mundaca, Prof. Diana Ürge-Vorsatz and Dr. Charlie Wilson.**

The literature on global warming of 1.5°C above pre-industrial levels is growing rapidly since the adoption of the Paris Climate Agreement. At the risk of oversimplifying, the emerging literature is being dominated by global scenarios, supply-side energy technologies, mitigation costs, and the use of Integrated Assessment Models (IAMs). This body of knowledge is increasingly being used to inform policymakers about the environmental, economic and societal impacts of mitigation pathways relevant to a warming limit of 1.5°C (or well below 2°C). Although this literature is providing relevant policy insights and contributions, an emerging knowledge gap can also be discerned. To complement and strengthen the existing literature, policy-oriented studies addressing the demand-side of energy-economy systems, including societal transformation pathways to limit global warming below 1.5°C, are urgently needed. This is critical to improve and support current flows of policy-relevant research.

This Special Issue aims to provide a series of multi-disciplinary and comprehensive deep decarbonisation studies addressing various demand-side aspects of energy-economy systems in line with a 1.5°C target. It will provide a platform to share, discuss and scrutinise cutting-edge knowledge on policy instruments, global/regional/national/sub-national/city-level governance, technology change and behavioural, economic and financial issues from a ‘1.5°C demand-side’ perspective. It will cover energy using systems (e.g. buildings, cities, industry, transportation), energy services (e.g. heating, lighting, cooling) and distributed small (scale) renewables energy technologies.

The special issue will feature high-quality papers that explicitly address the 1.5°C target and provide policy-relevant outputs for a decarbonised economy. **Guest editors welcome theoretical papers, methodological studies, scenario analyses and empirical assessments that focus on ambitious socio-technical and economic transformational pathways that are demand-side oriented and consistent with global warming of 1.5°C above pre-industrial levels.**

Researchers from all disciplines are invited to submit papers investigating the following themes, including, but not limited to:

- Ambitious bottom-up scenarios encompassing specific mitigation pathways of end-use energy sectors (e.g. buildings, transportation)
- Consistency and gaps of near- and long-term energy demand scenarios with historical trends and energy supply oriented-studies
- Narratives and scenario drivers of future demand-side developments
- Demand-side or sectoral IAM and non-IAM studies
- Interactions, synergies and overlaps in ambitious climate policy portfolios addressing energy use
- Theory and emerging practice of stringent demand-side policy evaluation; including the suitability and inclusivity of methodologies, tools and metrics
- New or innovative methodological tools to analyse demand-side responses (e.g. agent-based models, randomised control trials, field experiments, input-output models, dynamic stochastic computable general equilibrium)
- Ex-ante or ex-post performance of ambitious consumption-based policy instruments and measures
- Share of demand-side measures under different scenarios and cost mitigation gap between 1st best and 2nd best policy instruments
- Governance and institutional capacity requirements to support and cope with ambitious demand-side decarbonisation pathways and policies
- Medium and long-term risks and uncertainties of fragmented policy regimes addressing end-use energy services and low-carbon technologies
- Policy regimes, synergies, limits and hurdles of ambitious energy efficiency goals
- Ex-ante evaluation of demand-side policies contained in Nationally Determined Contributions (NDCs)
- Sustainable energy systems and rapid decarbonisation at a city- or community-level
- Demand-side technology and behavioural aspects of highly stringent energy efficiency targets
- “Optimal” mix of carbon pricing, stringency level of other policies, and level of international cooperation
- Emission-reduction potential of demand-side innovations with strong consumer appeal
- Behavioural-based policy intervention (e.g. choice settings) targeting energy use and low-carbon energy technologies
- Understanding human behaviour, lifestyle changes and consumer decision-making in rapid energy transitions
- Behavioural field experiments addressing ambitious decarbonisation policies and strategies
- Economic and sustainable development benefits and trade-offs, multiple-impacts of ambitious demand-side decarbonisation pathways
- Stringent demand-side clean energy technology policies and effects on employment, poverty and economic inequalities
- The economic efficiency (including social costs of carbon emissions) of ambitious demand-side mitigation pathways
- Social inclusiveness and equity issues of stringent demand-side policies; including carbon pricing mechanisms

- Implications and effects of stringent demand-side measures on physical, economic, social, political and ethical limits associated with carbon dioxide removal (CDR) solutions
- Financial mechanisms and performance criteria for required demand-side investments
- Implications of asset stranding and financial stress tests for demand-side energy infrastructure involving positive net emissions
- Innovative business models to rapidly accelerate the market uptake of energy efficiency and micro/small scale renewable energy technologies

Submissions and guidelines

This Special Issue solicits original work that must not be under consideration for publication in any other journal. Submitted manuscripts need to make an explicit treatment of demand-side issues in line with the 1.5°C target. All submitted contributions must be written in English. Authors must follow the “Instructions for Authors” available [here](#).

Before full paper submission, authors are asked to send an extended abstract (400 words) via email (dsrsiee@gmail.com) to the guest editors for confirmation on the suitability to the special issue. Authors are also asked to include short biographies (100 words maximum). If selected, manuscripts and any supplementary material must be submitted through the Springer Editorial Manager system, available [here](#). The submission timelines are to ensure accepted papers are eligible for potential consideration by the IPCC Special Report on Global Warming of 1.5°C.

Key dates

Abstract submission	15 th August 2017
Notification selected abstracts	31 st August 2017
Submission full papers	1 st November 2017

For additional information on the style guide for authors please see the journal website at the following link: <http://www.springer.com/journal/12053>

If you have any questions concerning your submission, please contact Prof. Luis Mundaca (luis.mundaca@iiee.lu.se).



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