

**\*CALL FOR PAPERS\***

## **Histories of Flexibility**

### **Special Issue**

**Journal of Energy History / Revue d'histoire de l'énergie (JEHRHE)**

#### **Co-Editors:**

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#### **Description:**

Over the last five years, flexibility has emerged as a key topic in academic, industry and policy debates concerning the decarbonization of contemporary energy systems (IEA, 2008; Goutte and Vassilopoulos, 2019; Ofgem, 2017; Martinot, 2016; Powells et al. 2014). These conversations have primarily developed around the challenge of maintaining the synchrony between energy supply and demand whilst also reducing the carbon intensity of energy networks. Widespread decarbonization is seen to require substantial investment in renewable resources such as wind, solar and tidal power, yet these resources are each characterised by distinct rhythms of generation (day and night cycles, tide timetables) that do not necessarily align with the times when energy is needed.

Researchers are consequently investigating ways in which the flexibility of energy systems can be increased, with flexibility typically being seen as a system's ability to "respond rapidly to large fluctuations in demand and supply, both scheduled and unforeseen variations and events, ramping down production when demand decreases, and upwards when it increases" (IEA, 2008: 14). It is in this context that there is growing interest in the *flex-abilities* of different aspects of energy systems, including the potential for generators to quickly deliver energy when needed; for businesses and organisations to shed or reduce their consumption at specific moments; or for residential consumers to reduce peak load by changing the timing of energy-demanding practices.

However, across the energy sector, issues of flexibility are routinely presented as contemporary challenges linked to novel imperatives of decarbonisation and renewable supply. Practically no attention has been paid to the ways in which past energy systems have been variously (in)flexible, to earlier efforts to manage the relation between supply and demand, or to how such strategies reproduce specific assumptions about 'normality' and normal service in different societies and historical periods. As such, there is little sense of how understandings of flexibility have developed and of how they have been built into the design and operation of energy systems over time.

We are consequently inviting contributions for a special issue of the Journal of Energy History on the 'Histories of Flexibility'. We believe that contemporary debates about flexibility could and should be informed by understandings of how temporal and spatial relations between supply and demand have been configured in the past, and of the processes and politics involved. We therefore invite articles that contribute to an understanding of how supply-demand relations have been managed historically and that, in one way or another, inspire and inform contemporary debates. Whilst most attention to date has focused on flexibility in the context of the electricity sector (partly because electricity is difficult to store), we invite contributions that go beyond this context, suggesting that there is potentially much to learn about how supply-demand relations have been organised and managed in relation to other fuels (coal, gas, oil). We are also interested in accounts that detail the different forms of social and institutional flexibility associated with different 'end uses' (for instance, heating, automobility), across different sectors. There are no specific limits with regards to time period.

Specific topics that might be explored in more depth include:

- Issues of aggregation and scale and how these relate to the challenges of managing supply-demand relations – including the move from smaller scale to networked grids.
- Responses to instances of 'shortage' or crises in supply – what do these reveal about diverse forms of flexibility, about notions of normality and about the periods in which they occur? As well as moments of breakdown, such as power cuts there are other revealing forms of restriction, for instance in war times or times of economic crisis.
- Methods of handling variations over different time scales: for instance, seasonal fluctuations as well as daily peak loads.
- How changes in societal and institutional rhythms, e.g. working hours, holiday periods, etc. have a bearing on both the 'need' for energy and when it is required.
- Methods and techniques for recording and representing the relation between supply and demand in real time, and for forecasting future needs.
- The political and institutional organisation of energy systems, and how these constitute pressures for and interests in different forms of flexibility.

### **Submission:**

To have your paper considered for this special issue, please send an abstract of no more than 300 words to Peter Forman at [p.forman@lancaster.ac.uk](mailto:p.forman@lancaster.ac.uk), by June 7<sup>th</sup> 2019. Abstracts will be reviewed by the co-editors and authors will notified of the success of their applications by June 20<sup>th</sup> 2019.

We have funding from CREDS (Centre for Research into Energy Demand Solutions) to host and organise a two-day workshop for contributors (scheduled for December 2019). This event will provide an opportunity to revise, comment on and improve the coherence of the draft articles and ensure that the special issue adds up to more than the sum of its parts.

**Timeline:**

7 <sup>th</sup> June 2019	Deadline for abstract submission
20 <sup>th</sup> June 2019	Selection of authors
10 <sup>th</sup> November 2019	Deadline for first paper drafts
18 <sup>th</sup> December 2019	Workshop to review and discuss papers (funded by CREDS)
January – August 2020	Editing submissions
28 <sup>th</sup> August 2020	Final deadline for submission to the <i>Journal of Energy History</i>

**The Journal:**

The Journal of Energy History / Revue d'histoire de l'énergie is the first (electronic, open access) journal in French- or English-speaking academia dedicated to the study of the history of energy. At the heart of human history, concerns about energy have increasingly become global, complex, and pressing. They merit rigorous investigation and study, including historical inquiry. Furthermore, the history of energy helps us understand the history of human society and sheds light on contemporary challenges.

The Journal of Energy History / Revue d'histoire de l'énergie seeks to go beyond studies that treat different sources and forms of energy in isolation. The journal creates new opportunities for scholarship and publication in which the full potential of historical research can be realized by comparing and contrasting different forms of energy produced and consumed in their social, political, economic, technological, and cultural contexts.

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