

Call for Papers: Royal Geographical Society-IBG Annual Conference, London, 1-4 September 2020

Socio-spatial patterns of energy infrastructure: investigating the spatiality of energy infrastructure through the low carbon challenge

Sponsored by the Energy Geographies Research Group

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The recent transformational growth in energy infrastructure, with the prospects of escalating growth to come, has been labelled a contemporary 'infrastructural moment' (Bridge et al., 2018: 9). This growth has materialised in a variety of forms, stimulated by the pursuit of low carbon energy flows. This *infrastructural moment* has produced much interest in the social science and geography fields, keen to grasp how energy infrastructure co-evolves with socio-economic institutions, actors and social norms (Calvert, 2015). Yet the socio-spatial patterns of interactions surrounding an infrastructural moment such as this are still only partly understood.

Energy infrastructure understood as socio-material and technical systems points towards the capacity of infrastructure to organise social as well as ecological relations, becoming deeply intertwined with the structure of society, with spatial differentials in investments and outcomes. Complex architectures of political power and spaces of governance have emerged as governments and other agents, at all levels, seek to orchestrate and regulate energy infrastructure, mobilising and organising actors, projects and interests in order to convey their priorities around economic competitiveness, and achieve environmental goals, energy security and infrastructure provision. New challenges emerge in reconciling new 'decentralised' regimes of provision, seeking *attunement* to contextual circumstances, with the pursuit of spatially integrated and interconnected energy infrastructure (Goldthau, 2014).

Concerns include the spatial unevenness of distribution of smaller-scale low carbon electricity, heat and storage infrastructure across cities and regions and the geographical reach, terms of access, and forms of ownership of infrastructure systems that influence energy access and low carbon energy deployment. The configuring effects of energy infrastructure also affect the politics of decarbonisation, in shaping the scope of democratic steering. Such concerns can become starkly apparent where infrastructures become entangled in governance re-scaling and border conflicts, be they market integration, secession (as with Brexit and devolution), or constructing spaces for localised energy governance.

Against this backdrop, this panel will explore the intersection between the spatiality of energy infrastructure in the context of the low carbon challenge with questions of scale, governance and borders.

We are particularly interested in, but not limited to, papers that address the following:

- linkages between energy governance, spatial transformations and multiple scales in sustainable infrastructure solutions;

- understanding the governance challenges arising where large-scale infrastructures interface with local solutions;
- the rise of new spatial forms of energy infrastructure from super-grids to energy regions and local energy systems;
- the way energy infrastructures draw together and advance the material interests of specific actors and groups;
- the implications of an increasing variety of energy storage facilities and smart electricity grid for reconfiguring energy flows and their governance challenges.

Anticipated Format:

We aim to organise two sessions that will include four presentations each with time for discussion between speakers and session participants.

Submission Details:

Please email your submission to Carla De Laurentis (delaurentisc@cardiff.ac.uk) including paper title (max 15 words) and abstract (max 300 words), name(s) and affiliation(s) by the 7th of February 2020. The convenors will notify all authors of whether their paper can be accommodated in the session by Friday, 11th February.

The conference organiser is also piloting innovative formats for distance participation, and we welcome contributions that will engage with this format.

References cited:

- BRIDGE, G., ÖZKAYNAK, B. & TURHAN, E. 2018. Energy infrastructure and the fate of the nation: Introduction to special issue. *Energy Research & Social Science*, 41, 1-11.
- CALVERT, K. 2015. From 'energy geography' to 'energy geographies'. *Progress in Human Geography*, 40, 105-125.
- GOLDTHAU, A. 2014. Rethinking the governance of energy infrastructure: Scale, decentralization and polycentrism. *Energy Research & Social Science*, 1, 134-140.