BIEE Conference Dialogue Session Proposal - Examples

Dialogue Session Proposals 2018

1. Mind the Gaps: How will a consumer-centric energy system affect organisational structures, sector skills and careers in energy?
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   The proposed dialogue session will discuss the impact of the transition to a consumer-centric on organisational structures, career paths and sector skills in energy. Attracting women and younger people to the industry will be essential to avoid the risk of skills gaps.

   Relevance of the Dialogue Session to the Conference Theme

   The architecture of the energy system is evolving rapidly from traditional centralised supply-centric systems dominated by multinational corporations to multiple smaller-scale, distributed, interlocked systems, increasingly driven by Big data and automation, in which the consumer is king. New technologies such as blockchain and automation will further transform a landscape that over the last decade has been altered beyond recognition by renewable energy and energy storage technologies.

   What is the future of work in such an energy system, and how will companies and careers change as the energy landscape evolves? How can the sector be made more attractive to women and young people? If skills gaps emerge, where will they be felt most keenly, and what can be done to fill them?

   A recent research briefing by the UK Parliamentary Office of Science and Technology noted that: “Within the workforce there are growing skills shortages, in part due to global competition for skilled workers and low uptake of energy industry jobs among young people”. The briefing highlighted the risk of the ageing of the energy sector workforce if younger people are not incentivised to join the industry.

   We propose this dialogue session to explore the skills needed by companies to meet the energy challenges of the future, how employees will interact with technologies serving the global energy system and how companies will have to transform themselves to meet the challenges ahead.

   The trend towards a more consumer-focused energy system has profound implications for the skills needed by the industry. While new technologies are expected to lead to disruptive change, however, there is a strong likelihood that conventional fossil fuels will continue to play a part in the energy mix until 2030 and probably beyond. Through this dialogue session, we seek to understand how the new and traditional energy systems will interact, and what that will mean for organisational structures, skills and employment trends in the future.

   Who will be interested in the dialogue session?
The dialogue session should attract students, academics, industry leaders, policy makers and energy sector strategists.

It will be valuable for industry leaders seeking to attract the most talented individuals to their organisation; government officials aiming to cultivate relevant skills in the workforce through education and training; as well as students and academics who are at the cutting edge of thought-leadership in the energy sector. The discussion will be focussed on challenges faced by the global energy sector, not just the UK.

The co-existence of old and new energy has already led large electricity suppliers such as E.On and RWE to split their business into two parts. As the biggest oil and gas majors increasingly target new energy in their portfolios, organisational structure and human capital have become hot topics going far beyond the HR function.

2. Consumers, voters, residents or investors: who will be at the heart of future community energy organisations?

Led by Dr Tim Braunholtz-Speight, University of Manchester. Including: Dr Mary Gillie, Energy Local; Dr Emilia Melville, Carbon Co-op, Dr Jeff Hardy, Imperial College; Dr Maria Sharmina, University of Manchester

This dialogue session addresses the question of how shifts in financing, the energy market, and grid regulation and technology might affect the future structure of community energy organisations, and how citizens participate in them.

To date, community energy companies in the UK have largely focussed on renewable electricity generation. A range of corporate structures and membership models exist, but two dominate. Several early initiatives were Companies Ltd by Guarantee, where membership was limited to local residents, and projects were financed by grants and loans. However, the growth of community energy over the last decade has been dominated by Community Benefit Societies, a form of cooperative, where membership and finance are linked through the issue of interest-bearing but non-transferable ‘community shares’. A minimum investment is typically £100 or more; and shareholding is generally not limited to local residents. However, substantial cuts to FITS, and a number of other changes around investment regulations, have slowed new activity down and led many in the community energy sector to question the future viability of this business model.

The search for new business models offers opportunities to address some of the gaps in existing community energy. Thus it is notable that while these initiatives have increased direct participation of people in energy generation, it has tended to be as owners or investors. They have not – with one or two off-grid exceptions – sold energy direct to consumers. This is often attributed to technological and regulatory challenges associated with ‘local supply’ (difficulties in linking local electricity generation to consumption, and onerous regulation aimed at national scale organisations). However, moves towards smart grids, and regulator recognition of the decentralised future of the energy system, suggest that these barriers may be overcome. It may then be possible to create local energy cooperatives where
members might be consumers, instead of (or as well as) investors in an energy generation project. This could open up membership of community energy organisations to people who could not afford to become investors – placing consumers at the heart of community energy?

A further force for change is the growing engagement of local authorities in the UK energy system, potentially putting local voters at the heart of community energy. Some are working in partnership with community energy organisations (e.g. Oxford City Council and the Low Carbon Hub); others (e.g. Plymouth, Swansea) have created hybrid or spin-off community energy cooperatives. While constrained local government finances may threaten the growth of ‘civic energy’, they may also drive local authorities to explore it further as a potential longer term revenue stream.

Finally, some community energy companies do exist that focus on demand-side energy activities. They too are developing new business models around new technologies, such as LED lighting, energy storage and smart metering. And combinations of these activities with renewable generation could enable the creation of multifaceted community energy services companies (of which some already exist). This session brings together a panel of practitioners, policymakers and academics engaged in these issues to ask how might these shifts in consumer and civic engagement impact on community energy in the UK? What are the risks and opportunities, and how might various actors best respond?