

British Institute of  
Energy Economics

# OXFORD RESEARCH CONFERENCE

## Consumers at the Heart of the Energy System?

18- 19 September 2018, Blavatnik School of Government, Oxford, OX2 6GG



BIEE 12<sup>th</sup> RESEARCH CONFERENCE  
**Consumers at the Heart of the Energy System?**

Tuesday September 18 <sup>th</sup> 2018	
09:45	<b>Conference Registration</b> Blavatnik School of Government, 120 Walton Street, Oxford, OX2 6GG
10.30	<b>Welcome Prof Paul Ekins, Conference Chair</b>
10:35	<b>Opening Address Charles Hendry, Former Energy Minister, BIEE President</b>
11.00	<b>First Plenary Session: <i>Consumers at the Heart of the Energy System?</i></b>  Philip New, CEO, Energy Systems Catapult Barbara Hammond, MBE, CEO, Low Carbon Hub Peter Bance, CEO, Origami Energy
12.05	<b>Questions and Discussion</b>
13.00	<b>Lunch</b>
13:40	<b>Poster presentations:</b> Student posters will be on display throughout the conference, the following will be available at their poster during this break: Do green electricity products meet consumers' preferences? – A comparative study of green electricity products in Germany, the UK, France and Italy (ongoing research), <i>Scott MacDonald</i> ; Transmission and Distribution Losses of Electricity: What do we Lose in Terms of Growth and Poverty Reduction? Evidence from Benin, <i>Arnaud Dakpogan</i> ; Assessing the Needs of Ireland's First Generation of Sustainable Energy Communities, <i>Anitha Sampath</i> .

14.00	<b>First Parallel Session - Dialogue and Paper Sessions</b>			
	<b>Paper Session</b> <b>Distributional Aspects of UK Household Energy Consumption</b>	Role of household activities in peak electricity demand and distributional effects of Time-of-Use tariffs. <i>Dr. Timur Yunusov, University of Reading</i>	UK Energy Expenditure Shares - A Long Term View. <i>Dr. David Deller, Centre for Competition Policy, University of East Anglia</i>	No one left behind – Consumer empowerment, protection and universal service in the low carbon transition <i>Dr Chris Harris, npower</i>
	<b>Paper Session</b> <b>Demand Response: Barriers and Behaviours in Business and Small Consumers</b>	Business participation in demand response: a review of potential barriers. <i>Dr. Catarina Araya Cardoso, Westminster Business School</i>	Demand response as a common pool resource game: Nudges versus prices. <i>Ms. Penelope Buckley, Université Grenoble Alpes</i>	Swarm demand response: virtual storage by small consumers <i>Dr. Joachim Geske, Imperial College Business School</i>
	<b>Paper Session</b> <b>Energy Efficiency: Policy, Information and Rebound</b>	Energy efficiency policy instruments in the residential sector: Implementing mechanisms for successful low-carbon transitions in households <i>Dr. Cristina Penasco, University of Cambridge</i>	Identifying the limits of the rebound effect. <i>Dr Tina Fawcett, University of Oxford</i>	Choosing energy efficiency – consumer response to operating costs at the point of sale. <i>Ms Fiona Brocklehurst, Ballarat Consulting</i>
	<b>Paper Session</b> <b>Distributed and Local Energy: Markets and Regulation</b>	Retail Electricity Markets in Transition: The Quest for Adequate Design. <i>Dr. Luis Boscan, University of Southern Denmark (SDU)</i>	Markets for distributed energy resources in electrical power systems: criteria, assessment, and analysis of latest initiatives in Australia. <i>Prof Frank Jotzo, The Australian National University</i>	Unlocking Local Energy Markets <i>Ms Rachel Bray, University of Exeter</i>
	<b>Dialogue Session</b>	Do people matter? Can we get to a low carbon, secure and affordable system without their engagement? Led by <i>Richard Hoggett, University of Exeter</i> . Including: <i>Rebecca Wallis, Independent; Catherine Mitchell, University of Exeter, Simon Roberts, Centre for Sustainable Energy</i>		
	<b>Dialogue Session</b>	Consumers, voters, residents or investors: who will be at the heart of future community energy organisations? Led by <i>Dr Tim Braunholtz-Speight, University of Manchester</i> . Including: <i>Dr Mary Gillie, Energy Local; Dr Emilia Melville, Carbon Co-op, Dr Jeff Hardy, Imperial College</i> .		
15:30	<b>Tea</b>			

16:00-17:30	<b>Second Parallel Session - Dialogue and Paper Sessions</b>			
<b>Paper Session</b> <b>Decentralised Energy: the Role of Pro(Con)sumers in Energy Storage and Smart Grids</b>	The role of consumers in the uptake of decentralised energy storage technologies. <i>Prof. Peter Taylor, University of Leeds</i>	Here comes the sun: The evolution of a Prosuming Project within a social housing estate. <i>Dr Nicolette Fox, SPRU, University of Sussex</i>	Integrating prosumers into the electricity grid: the interplay between technology and people. <i>Dr. Yael Parag, Interdisciplinary Center (IDC), Herzliya</i>	
<b>Paper Session</b> <b>Solar PV: Take-up and Network Integration Issues</b>	Prosumage of solar electricity: batteries, heating and mobility. <i>Dr Wolf-Peter Schill, DIW Berlin</i>	Modelling Take-Up of Residential Solar PV in the UK. <i>Mrs Sophie Heald, Cambridge Econometrics</i>	Spatio-temporal analysis of PV diffusion patterns: an integrated neural networks and agent-based model. <i>Mr. Ali Alderete Peralta, Cranfield University</i>	
<b>Paper Session</b> <b>Peer to Peer Trading: Prospects, Operation and Regulation</b>	Energy cooperatives: a missing piece of the peer-to-peer energy regulation puzzle? <i>Ms. Alexandra Schneiders, UCL Energy Institute, University College London</i>	Attitudes, preferences and intentions to participate in peer-to-peer electricity trading: The case of Southwest German households. <i>Mr. André Hackbarth, Reutlingen University</i>	From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform. <i>Dr. Lynne Kiesling, Purdue University</i>	
<b>Paper Session</b> <b>Energy Efficiency: Finance, Investment and Performance</b>	Financing energy efficiency retrofits – lessons for policy. <i>Dr Noam Bergmann, SPRU, University of Sussex</i>	Leveraging private household investment in energy efficient retrofit: a systematic evidence review of the policy options. <i>Mr. Niall Kerr, University of Edinburgh</i>	Further bridging the energy efficiency gap: heterogeneity, model error and time-consistency. <i>Dr. Daire Mccoy, Grantham Research Institute, LSE</i>	
<b>Paper Session</b> <b>Demand Response: Smart Meters, Dynamic Pricing and Consumer Engagement</b>	Causal Tree Estimation of Heterogeneous Household Response to Time-Of-Use Electricity Pricing Schemes. <i>Eoghan O'Neill, University of Cambridge</i>	Motivating energy conservation in organisations: Smart metering and the emergence and diffusion of social norms. <i>Dr. Peter Bradley, University of the West of England</i>		
<b>Dialogue Session</b>	Mind the Gaps: How will a consumer-centric energy system affect organisational structures, sector skills and careers in energy? Led by <i>Peter Stewart, Interfax</i>			

17:40	<p><b>Student Pitch presentation session</b></p>	<p>Incentivising households to reduce electricity consumption: A meta-analysis of the experimental evidence. <i>Penelope Buckley, Université Grenoble Alpes</i></p> <p>The Comfort Tool – Assessing perceived comfort improvements in four deep energy home renovations. <i>Ermal Kapedani, University of Hasselt</i></p> <p>Consumers as investors: proposal for an agent-based model simulating the uptake of energy-saving technologies by UK households. <i>Luciana Miu, Grantham Institute - Imperial College London</i></p> <p>The security of electricity supply to Switzerland – A demand-side analysis. <i>Alessandra Motz, Università della Svizzera italiana</i></p> <p>The implications of new sources of energy flexibility: A new consumer-focussed electricity system? <i>Mai Nguyen, The Open University</i></p> <p>Evaluating the impact of policy decisions on customer adoption of the renewable energy transition. <i>Kelvin Say, Curtin University</i></p>
18.30	<p><b>Accommodation Registration</b> Main Porters Lodge, St Anne’s College, 56 Woodstock Road, Oxford, OX2 6HS</p>	
19.00	<p><b>Conference Drinks and Dinner with After Dinner Speaker, St Anne’s College</b> 56 Woodstock Road, Oxford, OX2 6HS</p>	

## Wednesday September 19<sup>th</sup> 2018

**Blavatnik School of Government, 120 Walton Street, Oxford, OX2 6GG**

08:00	<p><b>Women in Energy Breakfast Session</b>            Prof. Catherine Mitchell, University of Exeter            Juliet Davenport, Good Energy            Kate Collyer, BEIS            Barbara Vest, Energy UK - <i>Moderator</i>            (open to all)</p>
08:00-08:30	<p><b>Conference Registration</b>            (Single Day Delegates)</p>
09.00	<p><b>Keynote Address: Basil Scarsella, CEO, UK Power Networks</b></p>
09.20	<p><b>Second Plenary Session: <i>New Technologies and Services</i></b>            Dr. Jeff Hardy, Senior Research Fellow, Grantham Institute, Imperial College, Co-author, Reshaping Regulation            Lawrence Orsini, Founder and CEO, LO3 Energy            Angie Boakes, General Manager, eMobility, Shell            Kingsmill Bond, New Energy Strategist, Carbon Tracker Initiative</p>
10.30	<p><b>Questions and Discussion</b></p>
11.00	<p><b>Coffee</b></p>

11.30	<b>Third Parallel Session - Dialogue and Paper Sessions</b>			
	<b>Paper Session</b> <b>Understanding Energy Demand in Households and Industry</b>	Modelling fuel demand of heterogeneous industrial consumers. <i>Dr. Paolo Agnolucci</i> <i>University College London</i>	Exploring socioeconomic and temporal characteristics of British and German residential energy demand. <i>Dr. Russell Mckenna, Karlsruhe Institute of Technology</i>	Diversity behind the meter - machine learning from household activities. <i>Dr. Phil Grunewald, University of Oxford, Environmental Change Institute</i>
	<b>Paper Session</b> <b>Business Models: Consumer Demand, Entrepreneurship and Community Energy</b>	Do consumers want the new business models we can offer? <i>Dr. Stephen Hall, University of Leeds</i>	Energy entrepreneurship business models innovation: insights from European emerging firms. <i>Mr. Michael Hamwi, ESTIA</i>	Community Energy: A New Democratised Energy System? <i>Dr Helen Roby, Coventry University</i>
	<b>Paper Session</b> <b>Energy Market Transformations and Challenges</b>	Unlocking the benefits to end consumers. <i>Mr. Nicholas Rubin, ELEXON Ltd</i>	Continuity and Disruption in UK Energy System Change: Mapping Expert Differences – and Understanding their Implications. <i>Dr. Mark Winskel, University of Edinburgh</i>	The role of utilities in enabling prosumers and flexible distributed energy resources. <i>Dr. Daniel Quiggin, Chatham House</i>
	<b>Paper Session</b> <b>Heat Systems: Consumer Take-up and Experiences</b>	BEIS Heat Networks Consumer Survey. <i>Mr Philip Cole, BEIS</i>	The use of consumer data for optimizing smart grids for electricity and district heating. <i>Dr. Carl Dalhammar, Lund University</i>	Experimenting with Heat Plans to discover how to help businesses and governments harness energy services to build an energy system people will want to pay for. <i>Dr. Matthew Lipson, ESC</i>
	<b>Dialogue Session</b>	Consumers and Citizens: the Political Economy of Nuclear Power Led by Prof. <i>Gordon MacKerron, SPRU, University of Sussex</i>		
	<b>Dialogue Session</b>	Modelling Energy Demand and Societal Drivers: The Final Frontier? Led by Prof. <i>Neil Strachan, University College London</i> and Dr <i>Paul E Dodds, UCL Energy Institute</i> . Including: <i>Dr Stephen Hall, University of Leeds; Francis Li, UCL; Amy O'Mahoney, Ofgem; Matt Lipson, Energy Systems Catapult; Sophie Heald, Cambridge Econometrics.</i>		

13.00	<b>Lunch</b>
13:40	<p><b>Poster presentations:</b> Student posters will be on display throughout the conference, the following will be available at their poster during this break</p> <p>Political Economy Analysis: Inefficiency of the electricity distribution sector of West Africa, <i>Richard Oduro</i>; Scope of electricity retail supply and the implications for business model innovation on the demand-side, <i>Laura Brinker</i>; Investigating demand-side solutions to addressing barriers in energy transitions: Study of Urban household in India, <i>Anjali Ramakrishnan</i></p>
14.00	<p><b>Third Plenary Session: <i>Impacts and Implications of a Consumer-Driven Energy System</i></b></p> <p><b>Chair: Jonathan Thurlwell, Managing Principal IPA Advisory</b></p>
	<p>Dermott Nolan, CEO, OFGEM          Juliette Davenport, CEO, Good Energy          Jenny Saunders, former CEO, NEA          Prof Nick Eyre, ECI, University of Oxford and End Use Energy Demand Centre Champion</p>
15.00	<b>Questions and Discussion</b>
15.30	<b>BIEE AGM</b>
15.45	<b>Tea</b>
16.00	Close