# 7<sup>th</sup> Annual LCEDN Conference



## Loughborough University, 30th May - 1st June 2018



#### **AGENDA OVERVIEW**

	30th May, Wednesday	31st May, Thursday	1st June, Friday
Time and Session	SESSION TITLES		
9.00- 10.30 PLENARY	Opening Plenary: Transforming Energy Access (LS)	Innovation and Technology Development (LS)	Under the Grid (co-sponsored by EEG) (LS)
	2 Min. PhD Poster Pitches	2 Min. PhD Poster Pitches	2 Min. PhD Poster pitches
10.30- 11.00	COFFEE BREAK		
11.00- 12.30	(i) Waste and Value Chains	(v) Energy Justice Revisited	(viii) Resilience concepts for energy (co-sponsored by EEG)
PARALLEL BREAK OUT SESSIONS	(ii) Planning and Energy Access (organised with CAFOD, IIED)	(vi) Challenges and Opportunities in Delivery Models for Micro and Mini-Grids (organised with the University of Strathclyde)	(ix) Innovative Financing for Energy Access
	(iii) Gender and Energy Policy	(vii) <b>The Mini-Grid Game</b> (organised with Energy Action Partners)	(x) Last Mile Distribution (organised with Practical Action)
	(iv) Ethno-Engineering		
12.30- 2.00	LUNCH and Ph.D Poster Co	mpetitions	
2.00- 3.30 SHOWCASE SESSIONS	Energy Catalyst Companies Showcase (LS)	Engineering Skills for the Future Showcase: (organised with EWB UK and the RAEng)	Clean Cooking Showcase (LS)
3.30- 4.00	TEA BREAK		
4.00-5.30 CLOSING PLENARY	Hybrid Innovative Businesses And Community Projects From The Global South (LS)	Networking Energy for Development	Transforming Energy Access, What have we Learnt and where do we go from here?
		CONFERENCE DINNER	



## LS = Live streamed via Smart Villages/LCEDN Webinar

## Day 1: 30<sup>th</sup> May, 2018 (Wednesday)

Time	Session details
9.00- 10.30 PLENARY Short Poster Pitches	Opening Plenary: Transforming Energy Access This opening session seeks to address the conference theme by exploring the idea of Transforming Energy Access by asking the question: transformation of what, how and for whom?  Welcome by Prof. Nick Clifford (Dean of the School of Social Science, Loughborough University)
	<ul> <li>Speakers:</li> <li>Ed Brown (Loughborough University, LCEDN)</li> <li>Steven Hunt (Senior Energy &amp; Innovation Advisor, UK Department for International Development)</li> <li>Jiska DeGroot (Energy Research Centre, University of Cape Town)</li> <li>Indira Shakya (Independent Consultant, Nepal) - joining remotely</li> </ul> 2 Min. PhD Poster Pitches
10.30- 11.00	COFFEE BREAK
11.00- 12.30 PARALLEL BREAK-OUT SESSIONS	<ul> <li>(i) Waste and Value Chains In the context of the rapid growth in the global market for off-grid renewable energy solutions, particularly solar PV, issues of future waste and supply chains require urgent attention. </li> <li>Introduction: Britta Turner (Durham University, LCEDN)</li> <li>Speakers: <ul> <li>Ankit Kumar (TU Eindhoven, Netherlands)</li> <li>Mariana Cover (University of Edinburgh)</li> <li>Declan Murray (University of Edinburgh)</li> <li>Anne Wambugu (Strathmore University, Kenya)</li> </ul> </li> </ul>
	<ul> <li>(ii) Planning and Energy Access (in collaboration with CAFOD, IIED)</li> <li>Using evidence from concrete projects and approaches, the session aims to identify the key challenges and success factors in planning and delivering energy solutions for household, livelihood and community development needs (such as healthcare and education).</li> <li>Speakers: <ul> <li>Satish Gautam (Renewable Energy for Rural Livelihood, Nepal)</li> <li>Sarah Wykes (CAFOD),</li> <li>Ben Garside (International Institute for Environment and Development)</li> <li>Gabrial Anandarajah, (University College London)</li> <li>Joanes Atela (African Centre for Technology Studies, Kenya)</li> </ul> </li> </ul>



#### (iii) Gender and Energy Research

Sustainable energy transformations need to build in understanding of socially structured networks of power, particularly as they relate to gendered dynamics of ownership, participation and control if they are to have the impacts that we hope for them. This session considers the implications of this for the planning, development and management of research programmes and for the development of more effective energy policy for equitable participation in what socio-technical transitions can become.

#### Session Leaders:

- Joy Clancy (University of Twente, Netherlands)
- Shukri Abdulkadir (Energia)
- Govinda Devkota (People Energy and Environment Development Association, Nepal)
- Jon Cloke (Loughborough University, LCEDN)

#### (iv) Ethno-Engineering

Ben and Jon will explain their approach on bridging the divide between anthropology and engineering based on a methodology used in previous workshops. The session will be highly interactive and participants will help co-design a renewable energy technology with culturally appropriate energy service value to a distinct community.

#### Speakers:

- Ben Campbell (Durham University, LCEDN)
- Jon Leary (Loughborough University and Gamos)

#### 12.30- 2.00 LUNCH BREAK

#### 2.00- 3.30 SHOWCASE SESSION

#### **ENERGY CATALYST COMPANIES SHOWCASE**

A wave of innovative technologies, financial and business models globally has accompanied the drop in prices of renewable energies; this session looks at the UK contribution to energy transformation through showcasing initiatives funded by DFID under Innovate UK's Energy Catalyst programme.

Moderator: Ed Brown (Loughborough University, LCEDN) Speakers:

- Alice Goodbrook (Innovate UK)
- Craig Jamieson (Rice Straw)
- Xiongwei Liu (Entrust MicroGrid LLP)
- Trevor Hardcastle (Frontier Technical Ltd))
- Colin Mallet (Trusted Renewables)
- Martyn Cowsill (Microgen Renewables)
- Simon Batchelor (Gamos)

#### 3.30- 4.00 TEA BREAK



#### 4.00-5.30 CLOSING PLENARY

## HYBRID INNOVATIVE BUSINESSES AND COMMUNITY PROJECTS FROM THE GLOBAL SOUTH

Revolutions of energy transformation in many countries are not being driven by formal commercial structures, but by grassroots communities, organic practitioner networks and indigenous, innovative business models. This session explores the challenges and opportunities of these initiatives.

Moderator: Jon Cloke (Loughborough University, LCEDN) Speakers:

- Dipti Vaghela (Hydro Empowerment Network, Myanmar)
- Tarek Ketelsen (Australian Water Partnership, Vietnam)
- Gerhard Fisher (PT Entec Indonesia and ASEAN Hydropower Competance Centre (HYCOM))
- Anshuman Lath (Gramoorja, India)
- Charity Wanjiku (Strauss Energy Ltd, Kenya)

### Day 2: 31st May, 2018 (Thursday)

Time	Session details	
9.00- 10.30 PLENARY Short Poster Pitches	Innovation and Technology Development Innovation for energy transformation will succeed or fail depending on the degree to which it is able to incorporate social, methodological and economic innovation with technological innovation. In this session we explore a variety of different approaches to innovation, with a particular focus on new developments in energy storage.  Speakers:  • Upul Wijayantha (Loughborough University) • Jonathan Radcliffe (Birmingham University) • Lucy Shaw and Gabriel Davies (CrossBoundary - joining remotely) • Peter Robbins (Open University)	
10.30- 11.00	COFFEE BREAK	
11.00- 12.30 PARALLEL BREAK-OUT SESSIONS	<ul> <li>(v) Energy Justice- Revisited         Following on from the theme of last year's LCEDN conference, this session accepts that transformation of energy systems that act to entrench existing structures of socio-cultural inequality will fail to have any effect on poverty alleviation – therefore, what kind of energy justice is essential?     </li> <li>Moderator: Britta Turner (Durham University, LCEDN)         Speakers:         <ul> <li>Ben Campbell (Durham University, LCEDN)</li> <li>Jiska De Groot (Energy Research Centre, University of Cape Town)</li> <li>Rosie Day (University of Birmingham)</li> <li>Komali Yenneti (University of New South Wales)</li> </ul> </li> </ul>	



## (vi) Challenges and Opportunities in Delivery Models for Micro and Mini-Grids (session led by Strathclyde University)

Following a brief welcome and introduction to the session and subject area, five speakers will present using case study analysis to draw out key themes on challenges in mini-grid delivery models at the nexus between technical, social and economic considerations for whole system sustainability. Each presenter finishes with key challenges or questions posed to spark discussion from the audience. The order of presentation "zooms out" from technical design to delivery models, productive use, regional/national planning and finally policy/institutional considerations. A facilitated discussion on the themes presented will ensue, taking an open framework of questions to presenters, feedback or brief summaries of related research currently being undertaken.

#### Speakers:

- Yacob Mulugetta (University College London)
- Surabhi Rajagopal (LCEDN/ACCESS Coalition)
- Aran Eales (Strathclyde University)
- Jonathan Bowes (Strathclyde University)
- Alfie Alsop (Strathclyde University)

#### (vii) The Mini-Grid Game

Participants in this session will have the opportunity to play a collaborative role-playing game built around a representation of a mini-grid system. Created by Energy Action Partners (Enact) the game is intended to be used as an educational and collaborative planning tool in designing a community-sized mini-grid system.

Ayu Abdullah (Southeast Asia Director of Enact Partners) and Long Seng To (Loughborough University, LCEDN) will facilitate the session.

#### 12.30- 2.00

#### LUNCH BREAK

#### 2.00- 3.30 SHOWCASE SESSION

#### **Engineering Skills for the Future Showcase:**

This session will outline the work that Engineers Without Borders UK and the Royal Academy of Engineering are undertaking, respectively, to enhance engineering education within the UK, sub-Saharan Africa and Asia. The session will aim to address the question; What engineering skills are needed for the future, globally, and how do we achieve this? The feedback gathered from the delegates will feed into a report that the LCEDN/EWB/RAEng are producing for DfID looking at skills for the future in engineering related to the energy sector. The first half of the session will feature formal presentations from three people who have recently completed EWB placements, this will be complemented by presentations outlining both EWB's efforts to ensure engineering education is fit for the future and an update on the RAE's international engineering education programmes and opportunities.

The second part of the session will, advocating a lifelong learning approach to engineering education, engage the delegates in a discussion on the needs and gaps within engineering education, globally.

#### Speakers:

- Katie Cresswell (Engineers without Borders)
- Sebastian Scott (Royal Academy of Engineering)



	<ul> <li>Ian Waters (Engineers without Borders)</li> <li>Nick Morris (Engineers without Borders)</li> <li>Tash Perros (Engineers without Borders)</li> </ul>
3.30- 4.00	TEA BREAK
4.00-5.30 CLOSING PLENARY	Networking Energy for Development The LCEDN occupies an important niche in UK low carbon energy research but needs to expand, not the network itself, but the niche, so the Network can be partner to a network of networks. This session will explore the ways in which the LCEDN can support (and be supported by) interactions with other regional networks and the implications for the future of South-South collaborations and the LCEDN itself.  Moderated by:  Jiska de Groot (Energy Research Centre, University of Cape Town) Dipti Vaghela (Hydro Empowerment Network, Myanmar) Ed Brown (Loughborough University, LCEDN) Surabhi Rajagopal (LCEDN/ ACCESS Coalition)
7.00	CONFERENCE DINNER

## Day 3: 1st June, 2018 (Friday)

Time	Session details
9.00- 10.30 PLENARY Short Poster Pitches	UNDER THE GRID (co sponsored by EEG)  Electricity access can contribute to socio-economic development. However, communities can still face significant challenges in accessing energy services in areas covered by the grid, especially informal settlements. End users can use different sources of electricity to meet their needs in a fluid and strategic ways to enhance their resilience. This session challenges assumptions on energy access statistics by discussing the mechanisms that allow electricity to contribute to development, as well as the continued challenges faced by communities in accessing electricity.  Chair: Jon Cloke (Loughborough University, LCEDN)  Speakers:  Marcela Tarazona (Oxford Policy Management)  Simon Trace (Oxford Policy Management)  Shonali Pachauri (International Institute for Applied Systems Analysis, Austria)  Mini Govindan (The Energy and Resources Institute, India)
10.30- 11.00	COFFEE BREAK
	(viii) Resilience Concepts for Energy (co-sponsored by EEG) In this session, we will discuss the emerging concept of energy resilience, focusing on the community level. What resilience issues are most important for the energy sector?



#### 11.00- 12.30

#### PARALLEL BREAK-OUT SESSIONS

How can energy systems contribute to resilience at different levels (e.g. community, regional and national)? What can we learn from resilience thinking in other sectors?

Chair: Marcela Tarazona (Oxford Policy Management) Speakers:

- Long Seng To (Loughborough University, LCEDN)
- Hu Du (Cardiff University)
- Collen Zalengera (Mzuzu University, Malawi)

#### (ix) Innovative Financing for Energy Access

Beyond considerations of individual ability to pay, it is critical to also understand and develop financing mechanisms that unlock capital for energy access provision, for both social enterprises and the end users they serve in the last mile.

Moderator: Surabhi Rajagopal (LCEDN/ ACCESS Coalition) Speakers:

- Malcolm Bricknell (LCEDN)
- Ben Good (Energy4Impact)
- Leslie Labruto (Acumen)
- Paolo Mele (Practical Action)
- Chris Moller (Open University)

#### (x) Last Mile Distribution (organised with Practical Action).

Last mile distribution plays a fundamental role in bringing energy access technologies to the last mile, as well as providing essential services like consumer financing and after-sales service. This session will feature two last mile distribution companies in Kenya and Sierra Leone who will present their business models and discuss the communities they reach and the challenges they face. The session will also reflect on opportunities and trends in the sector, highlight critical research gaps, and discuss the potential for collective approaches to supporting last mile distribution companies to increase their efficiency and scale their impact.

- Emma Colenbrander (Practical Action)
- Rocio Perez-Ochoa (Bidhaa Sasa)
- Mariama Kamara (Smiling through Light)
- Charlie Miller (GOGLA)

#### 12.30- 2.00

#### LUNCH BREAK

#### 2.00- 3.30 SHOWCASE SESSION

#### Clean Cooking

The clean/improved cookstove constitutes an icon of development practice that has yet to reach the potential demanded of it by donors and practitioners – this session seeks to interrogate successes and failures alike.

Chair: Simon Batchelor (GAMOS)

- Speakers:
  - Charlotte Ray (independent consultant)
  - Timothy Whitehead (Aston University)
  - Jon Leary (Loughborough University and GAMOS)
  - Ashutosh Sharma (IRADe)



3.30- 4.00	TEA BREAK
4.00-5.30 CLOSING PLENARY	Closing Session  Short overview - The final session re-visits the transformatory ideas discussed over the three days of the conference to suggest priorities and actions that can be useful to the national and international policy community. We will also focus on ongoing work that the LCEDN has been conducting with Practical Action around the ways in which academic researchers and other stakeholders in the energy sector might work together more effectively.  Moderator: Ben Campbell (Durham University, LCEDN)  Speakers:  Sarah Begg (Practical Action) Elizabeth Rasekoala (African Gong)

Thank-you for participating in the LCEDN 7th Annual Conference.

The LCEDN welcomes your comments on our latest report on 'Mapping the UK Research & Innovation Landscape: Energy and Development' available at: <a href="https://www.lcedn.com/resources/mapping-uk-research-innovation-landscape-energy-development">https://www.lcedn.com/resources/mapping-uk-research-innovation-landscape-energy-development</a>



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#### In collaboration with:



















#### With Support from:



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#### **About the Organizers:**

The Low Carbon Energy for Development Network (LCEDN) brings together researchers, policy-makers, practitioners and the private sector from across the United Kingdom (and indeed the rest of the world) to expand research capacity around low-carbon energy development in the Global South. The LCEDN was launched in January 2012 centred around hubs at the Durham Energy Institute and Loughborough University.